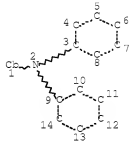
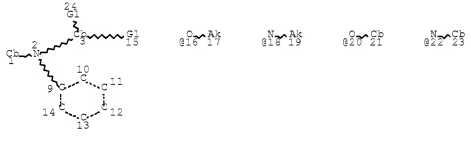
STRUCTURE SEARCH

```
=> d his l64

     (FILE 'HCAPLUS' ENTERED AT 15:32:18 ON 22 JUL 2008)
L64           38 S L60 OR L63

=> d que stat l64
L3  (     18405)SEA FILE=REGISTRY ABB=ON  PLU=ON  3593.5/RID
L4              STR
```

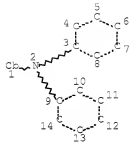


```
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS PCY  UNS  AT   1
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS E16 C  AT   1

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  14

STEREO ATTRIBUTES: NONE
L5            782 SEA FILE=REGISTRY SUB=L3 SSS FUL L4
L21             STR
```

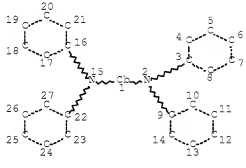


```
VAR G1=AK/CB/16/18/20/22/CN/X
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS PCY  UNS  AT   1
GGCAT   IS UNS  AT   3
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS E16 C  AT   1
ECOUNT  IS E6 C  AT   3

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  19

STEREO ATTRIBUTES: NONE
```

```
L23           57 SEA FILE=REGISTRY SUB=L5 SSS FUL L21
L31              QUE  ABB=ON  PLU=ON  PY<2004 OR PRY<2004 OR AY<2004 OR
                 MY<2004 OR REVIEW/DT
L33 (      18405)SEA FILE=REGISTRY ABB=ON  PLU=ON  3593.5/RID
L34              STR
```

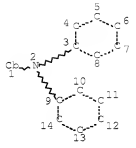


```
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS PCY  UNS  AT   1
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS E16 C  AT   1

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  14

STEREO ATTRIBUTES: NONE
L35 (        782)SEA FILE=REGISTRY SUB=L33 SSS FUL L34
L36 (    1474106)SEA FILE=HCAPLUS ABB=ON  PLU=ON  73/SC,SX
L37              QUE  ABB=ON  PLU=ON  PY<2004 OR PRY<2004 OR AY<2004 OR
                 MY<2004 OR REVIEW/DT
L38              STR
```

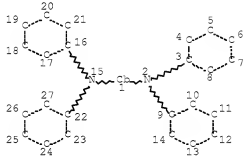


```
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS PCY  UNS  AT   1
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS E16 C  AT   1

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  27

STEREO ATTRIBUTES: NONE
L39 (        199)SEA FILE=REGISTRY SUB=L35 SSS FUL L38
L40 (         71)SEA FILE=HCAPLUS ABB=ON  PLU=ON  L39
L41 (         47)SEA FILE=HCAPLUS ABB=ON  PLU=ON  L40 AND L37
```

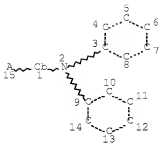
```
L42           18 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L41 AND L36
L43 (      18405)SEA FILE=REGISTRY ABB=ON  PLU=ON  3593.5/RID
L44              STR
```



```
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS PCY  UNS  AT   1
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS E16 C  AT   1

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  14

STEREO ATTRIBUTES: NONE
L45 (       782)SEA FILE=REGISTRY SUB=L43 SSS FUL L44
L46 (   1474106)SEA FILE=HCAPLUS ABB=ON  PLU=ON  73/SC,SX
L47              QUE  ABB=ON  PLU=ON  PY<2004 OR PRY<2004 OR AY<2004 OR
                 MY<2004 OR REVIEW/DT
L48              STR
```



```
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS PCY  UNS  AT   1
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS E16 C  AT   1

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  27

STEREO ATTRIBUTES: NONE
L49 (       199)SEA FILE=REGISTRY SUB=L45 SSS FUL L48
L50              STR
```



NODE ATTRIBUTES:
NSPEC IS RC AT 15
DEFAULT MLEVEL IS ATOM
GGCAT IS PCY UNS AT 1
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS E16 C AT 1

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 15

STEREO ATTRIBUTES: NONE

L51	(	257)	SEA FILE=REGISTRY SUB=L45 SSS FUL L50		
L52	(	58)	SEA FILE=REGISTRY ABB=ON	PLU=ON	L51 NOT L49
L53	(	31)	SEA FILE=HCAPLUS ABB=ON	PLU=ON	L52
L54	(	30)	SEA FILE=HCAPLUS ABB=ON	PLU=ON	L53 AND L47
L55		4	SEA FILE=HCAPLUS ABB=ON	PLU=ON	L54 AND L46
L56		118	SEA FILE=HCAPLUS ABB=ON	PLU=ON	L5/P
L57		80	SEA FILE=HCAPLUS ABB=ON	PLU=ON	L56 AND L31
L58		1474466	SEA FILE=HCAPLUS ABB=ON	PLU=ON	73/SC,SX
L59		19	SEA FILE=HCAPLUS ABB=ON	PLU=ON	L58 AND L57
L60		33	SEA FILE=HCAPLUS ABB=ON	PLU=ON	L42 OR L55 OR L59
L61		37	SEA FILE=HCAPLUS ABB=ON	PLU=ON	L23
L62		31	SEA FILE=HCAPLUS ABB=ON	PLU=ON	L61 AND L47
L63		8	SEA FILE=HCAPLUS ABB=ON	PLU=ON	L62 AND L58
L64		38	SEA FILE=HCAPLUS ABB=ON	PLU=ON	L60 OR L63

STRUCTURE SEARCH RESULTS

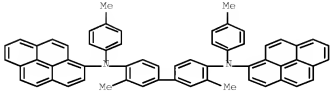
```
=> d l64 1-38 ibib ed abs hitstr hitind

L64  ANSWER 1 OF 38  HCAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:         2005:589128  HCAPLUS  Full-text
DOCUMENT NUMBER:          143:86447
TITLE:                    Light-emitting material for organic
                          electroluminescent devices
INVENTOR(S):              Kubota, Mineyuki; Funahashi, Masakazu;
                          Hosokawa, Chishio
PATENT ASSIGNEE(S):       Idemitsu Kosan Co., Ltd., Japan
SOURCE:                   PCT Int. Appl., 71 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 Japanese
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     ----------          ----   --------    -------------------
     --------
     WO 2005061656        A1    20050707    WO 2004-JP18964
                                                                   2004
                                                                   1213
                                              <--
          W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,
              CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG,
              ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP,
              KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
              MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL,
              PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR,
              TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
          RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
              ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH,
              CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT,
              LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF,
              CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     EP 1696015           A1    20060830    EP 2004-807321
                                                                   2004
                                                                   1213
                                              <--
          R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,
              MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL,
              SK, IS
     CN 1914293           A     20070214    CN 2004-80041655
                                                                   2004
                                                                   1213
                                              <--
     IN 2006CN02202       A     20070608    IN 2006-CN2202
                                                                   2006
                                                                   0619
                                              <--
     US 20070152565       A1    20070705    US 2006-583554
                                                                   2006
                                                                   0619
                                              <--
PRIORITY APPLN. INFO.:                       JP 2003-423317      A
                                                                   2003
                                                                   1219
                                              <--
                                             WO 2004-JP18964     W
                                                                   2004
                                                                   1213

ED   Entered STN:  08 Jul 2005
```

AB Disclosed is a light-emitting material for organic electroluminescent (EL) devices which is composed of an asym. anthracene derivative of a specific structure. Also disclosed are a material for organic EL devices and an organic EL device where an organic thin film layer composed of one or more layers including at least a light-emitting layer is interposed between a cathode and an anode. At least one layer of the organic thin film layer contains the material for organic EL devices by itself or as a component of a mixture Consequently, the organic EL device has a high luminous efficiency and a long life. Also disclosed are a light-emitting material for organic EL devices and material for organic EL devices which enable to realize such an organic EL device.

IT 157357-98-7
RL: DEV (Device component use); USES (Uses)
(light-emitting material for organic electroluminescent devices)

RN 157357-98-7 HCAPLUS

CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-N,N'-bis(4-methylphenyl)-N,N'-di-1-pyrenyl- (9CI) (CA INDEX NAME)



IC ICM C09K011-06
ICS H05B033-14; H05B033-22

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

IT 2085-33-8, Alq3 136925-63-8 154853-83-5 157357-98-7 669016-16-4
RL: DEV (Device component use); USES (Uses)
(light-emitting material for organic electroluminescent devices)

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 2 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:297617 HCAPLUS Full-text

DOCUMENT NUMBER: 142:363444

TITLE: (N-carbazolyl)fluorenes or diarylaminofluorenes showing good heat resistance, and their organic electroluminescent devices

INVENTOR(S): Tanabe, Yoshimitsu; Tsukada, Hidetaka; Shimamura, Takehiko; Totani, Yoshiyuki

PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 35 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005089382	A	20050407	JP 2003-325769	2003 0918

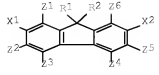
<--

PRIORITY APPLN. INFO.: JP 2003-325769

2003
0918

<--

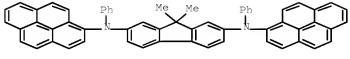
OTHER SOURCE(S): MARPAT 142:363444
ED Entered STN: 07 Apr 2005
GI



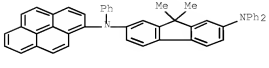
AB The fluorenes are I [X1 = (un)substituted N-carbazolyl, NAr1Ar2; X2 = NAr3Ar4; Ar1-Ar4 = aryl; ≥1 of Ar1-Ar4 = (un)substituted pyrenyl; Z1-Z6 = H, halo, OnZ; Z = (cyclo)alkyl, aryl; R1, R2 = H, (cyclo)alkyl, aryl, aralkyl; n = 0, 1]. Preferably, the I are used in hole transporting or emitter layers of the devices.

IT 669077-94-5P 849061-39-8P 849061-40-1P
849061-41-2P 849061-42-3P 849061-43-4P
849061-44-5P 849061-45-6P 849061-46-7P
849061-47-8P 849061-48-9P 849061-49-0P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(heat-resistant carbazolylfluorenes or diarylaminofluorenes for hole transporting or emitter layers for organic electroluminescent devices)

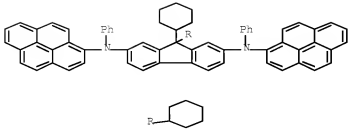
RN 669077-94-5 HCAPLUS
CN 9H-Fluorene-2,7-diamine, 9,9-dimethyl-N2,N7-diphenyl-N2,N7-di-1-pyrenyl- (CA INDEX NAME)



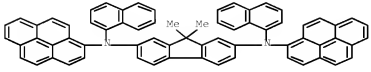
RN 849061-39-8 HCAPLUS
CN 9H-Fluorene-2,7-diamine, 9,9-dimethyl-N2,N2,N7-triphenyl-N7-1-pyrenyl- (CA INDEX NAME)



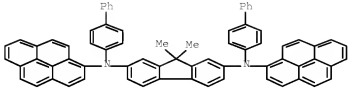
RN 849061-40-1 HCAPLUS
CN 9H-Fluorene-2,7-diamine, 9,9-dicyclohexyl-N2,N7-diphenyl-N2,N7-di-1-pyrenyl- (CA INDEX NAME)



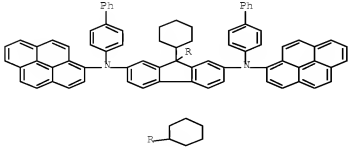
RN 849061-41-2 HCAPLUS
CN 9H-Fluorene-2,7-diamine, 9,9-dimethyl-N2,N7-di-1-naphthalenyl-N2,N7-di-1-pyrenyl- (CA INDEX NAME)



RN 849061-42-3 HCAPLUS
CN 9H-Fluorene-2,7-diamine, N2,N7-bis([1,1'-biphenyl]-4-yl)-9,9-dimethyl-N2,N7-di-1-pyrenyl- (CA INDEX NAME)

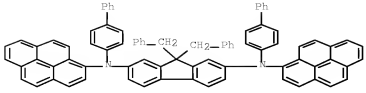


RN 849061-43-4 HCAPLUS
CN 9H-Fluorene-2,7-diamine, N2,N7-bis([1,1'-biphenyl]-4-yl)-9,9-dicyclohexyl-N2,N7-di-1-pyrenyl- (CA INDEX NAME)

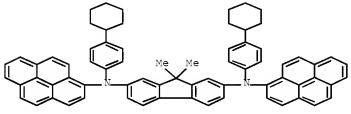


RN 849061-44-5 HCAPLUS
CN 9H-Fluorene-2,7-diamine, N2,N7-bis([1,1'-biphenyl]-4-yl)-9,9-

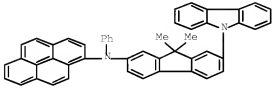
bis(phenylmethyl)-N2,N7-di-1-pyrenyl- (CA INDEX NAME)



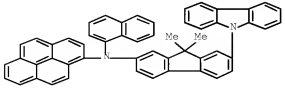
RN 849061-45-6 HCAPLUS
CN 9H-Fluorene-2,7-diamine, N2,N7-bis(4-cyclohexylphenyl)-9,9-dimethyl-N2,N7-di-1-pyrenyl- (CA INDEX NAME)



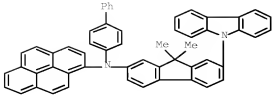
RN 849061-46-7 HCAPLUS
CN 1-Pyrenamine, N-[7-(9H-carbazol-9-yl)-9,9-dimethyl-9H-fluoren-2-yl]-N-phenyl- (CA INDEX NAME)



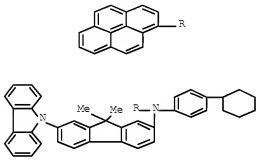
RN 849061-47-8 HCAPLUS
CN 1-Pyrenamine, N-[7-(9H-carbazol-9-yl)-9,9-dimethyl-9H-fluoren-2-yl]-N-1-naphthalenyl- (CA INDEX NAME)



RN 849061-48-9 HCAPLUS
CN 1-Pyrenamine, N-[1,1'-biphenyl]-4-yl-N-[7-(9H-carbazol-9-yl)-9,9-dimethyl-9H-fluoren-2-yl]- (CA INDEX NAME)



RN 849061-49-0 HCAPLUS
CN l-Pyrenamine, N-[7-(9H-carbazol-9-yl)-9,9-dimethyl-9H-fluoren-2-yl]-N-(4-cyclohexylphenyl)- (CA INDEX NAME)



IC ICM C07C211-61
ICS C07D209-86; C09K011-06; H05B033-14; H05B033-22
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 25, 27
IT 669077-94-5P 849061-39-8P 849061-40-1P
849061-41-2P 849061-42-3P 849061-43-4P
849061-44-5P 849061-45-6P 849061-46-7P
849061-47-8P 849061-48-9P 849061-49-0P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(heat-resistant carbazolylfluorenes or diarylaminofluorenes for hole transporting or emitter layers for organic electroluminescent devices)

L64 ANSWER 3 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:138322 HCAPLUS Full-text
DOCUMENT NUMBER: 142:228449
TITLE: Hole-transporting polymers and organic electroluminescent devices containing the same
INVENTOR(S): Ishii, Toru; Mashimo, Kiyokazu; Agata, Takeshi; Moriyama, Hiroaki; Ozaki, Tadayoshi; Hirose, Eiichi; Okuda, Daisuke; Yoneyama, Hiroto; Seki, Mieko; Sato, Katsuhiro
PATENT ASSIGNEE(S): Fuji Xerox Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

JP 2005042004	A	20050217	JP 2003-277732	2003 0722 <--
PRIORITY APPLN. INFO.:			JP 2003-277732	2003 0722 <--

ED Entered STN: 17 Feb 2005

AB The hole-transporting polymers involve repeating units of monomers which show hole-transporting property, have maximum optical absorption on the longer wave side than 360 nm in CH2Cl2, and the absolute value of reorientation energy [ABS(ΔH); the difference between the absolute value of ionizing energy necessary for forming cation radicals of the monomers and the absolute value of electron affinity generated when the cation radicals of the monomers become neutral mols.] ≤0.6 eV. Preferably, the polymer have, in the main chain backbones, tertiary aromatic amine structures, preferably represented by the general formula C6H4NArX(NArC6H4)k (k = 0, 1; X = divalent aromatic group, heterocyclic group; Ar = monovalent aromatic group, heterocyclic group). The organic electroluminescent devices having large emission intensity and high emission efficiency contain the hole-transporting polymers in ≥1 of organic compds. layers disposed between a pair of electrodes, ≥1 of which is transparent or translucent.

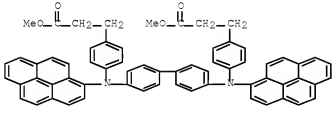
IT 842172-04-7P 842172-06-9P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(hole-transporting polymers for organic EL devices)

RN 842172-04-7 HCAPLUS

CN Benzenepropanoic acid, 4,4'-[[1,1'-biphenyl]-4,4'-diylbis[4,1-phenylene(1-pyrenylimino)]]bis-, dimethyl ester, polymer with 1,2-ethanediol (9CI) (CA INDEX NAME)

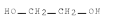
CM 1

CRN 842172-03-6
CMF C64 H48 N2 O4



CM 2

CRN 107-21-1
CMF C2 H6 O2

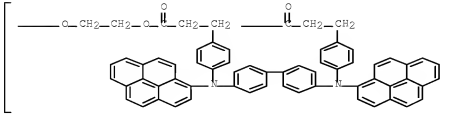


RN 842172-06-9 HCAPLUS

CN Poly[oxy-1,2-ethanediyloxy(1-oxo-1,3-propanediyl)-1,4-phenylene(1-pyrenylimino)[1,1'-biphenyl]-4,4'-diyl(1-pyrenylimino)-1,4-

phenylene(3-oxo-1,3-propanediyl)] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

IC ICM C08G063-685
ICS C09K011-06; H05B033-14; H05B033-22
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 38
IT 838896-34-7P 838896-35-8P 842172-04-7P
842172-06-9P 842172-11-6P 842172-12-7P 842172-14-9P
842172-15-0P 842172-17-2P 842172-18-3P 842172-19-4P
842172-20-7P 842172-22-9P 842172-23-0P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(hole-transporting polymers for organic EL devices)

L64 ANSWER 4 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:117087 HCAPLUS Full-text
DOCUMENT NUMBER: 142:207357
TITLE: Organic electroluminescent device based on pyrene derivatives and the pyrene derivatives
INVENTOR(S): Li, Xiao-Chang Charles; Okamura, Yoshimasa; Ueno, Kazunori; Tashiro, Masashi; Tashiro, Hideki; Prakash, G. K. Surya
PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Japan
SOURCE: U.S., 17 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6852429	B1	20050208	US 2003-634755	

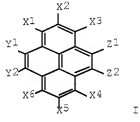
2003
0806

<--

US 20050031898 A1 20050210
PRIORITY APPLN. INFO.: US 2003-634755
2003
0806

<--

OTHER SOURCE(S): MARPAT 142:207357
ED Entered STN: 10 Feb 2005
GI



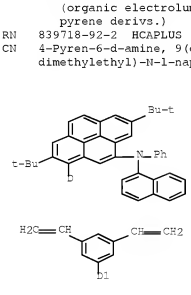
I

AB Pyrene-based compds. are described by the general formula I (Z1 = H, D, O, Si, Se, (un)substituted aryl, (un)substituted heteroaryl, (un)substituted aryl amine, or a combination thereof; Z2 = H or D; l of Y1 and Y2 = H, D, O, Si, Se, (un)substituted aryl, (un)substituted heteroaryl, (un)substituted aryl amine or a combination thereof, and the other of Y1 and Y2 = H or D; and X1-6 = independently selected H, D, alkyl, or aryl groups). Preferably, ≥1 of X1-6 = a bulky alkyl or aryl group such as tert-Bu and ≥1 of X1-6, Y1, Y2, Z1, and Z2 = D. Z1 and l of Y1 and Y2 may be hole injection and/or electron injection chromophores. Organic light-emitting devices incorporating the compds. in active, hole transport, and/or electron transport layers are also described. The pyrene based compound can serve directly to constitute the layers or as a host and/or dopant.

IT 839718-92-2
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent devices based on pyrene derivs. and pyrene derivs.)

RN 839718-92-2 HCAPLUS

CN 4-Pyren-6-d-amine, 9(or 10)-(3,5-diethenylphenyl)-2,7-bis(1,1-dimethylethyl)-N-1-naphthalenyl-N-phenyl- (9CI) (CA INDEX NAME)

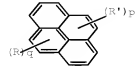


IC ICM H05B033-14
INCL 428690000; 428917000; 252301160; 252301350; 313504000; 313506000;

```
     257040000; 257103000
CC   73-11 (Optical, Electron, and Mass Spectroscopy and
     Other Related Properties)
     Section cross-reference(s): 25, 76
IT   839713-18-7   839713-19-8   839713-20-1   839713-21-2
     839713-22-3   839713-23-4   839713-24-5   839713-25-6
     839713-26-7   839713-27-8 839718-92-2
     RL: DEV (Device component use); USES (Uses)
        (organic electroluminescent devices based on pyrene derivs. and
        pyrene derivs.)
REFERENCE COUNT:          50    THERE ARE 50 CITED REFERENCES AVAILABLE
                                FOR THIS RECORD. ALL CITATIONS AVAILABLE
                                IN THE RE FORMAT

L64  ANSWER 5 OF 38  HCAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:         2004:799549  HCAPLUS  Full-text
DOCUMENT NUMBER:          141:304000
TITLE:                    Process for preparation of
                          1,6-bis(diphenylamino)pyrene derivatives as
                          electroluminescent devices
INVENTOR(S):              Funahashi, Masakazu
PATENT ASSIGNEE(S):       Idemitsu Kosan Co. Ltd., Japan
SOURCE:                   PCT Int. Appl., 51 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 Japanese
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     ----------------    ----   --------    --------------------
     --------
     WO 2004083162        A1    20040930    WO 2004-JP2945
                                                                   2004
                                                                   0308
                                             <--
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,
             CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG,
             ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP,
             KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
             MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL,
             PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR,
             TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW,
             AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY,
             CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,
             NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM,
             GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     EP 1604974           A1    20051214    EP 2004-718430
                                                                   2004
                                                                   0308
                                             <--
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,
             MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ,
             EE, HU, PL, SK
     CN 1784376           A     20060607    CN 2004-80012602
                                                                   2004
                                                                   0308
                                             <--
     IN 2005CN02302       A     20070406    IN 2005-CN2302
                                                                   2005
                                                                   0919
                                             <--
     US 20070009758       A1    20070111    US 2005-549801                  current
                                                                   2005      application
                                                                   1121
                                             <--
```

PRIORITY APPLN. INFO.: JP 2003-76772 A 2003 0320
<-- WO 2004-JP2945 W 2004 0308

OTHER SOURCE(S): MARPAT 141:304000
ED Entered STN: 30 Sep 2004
GI

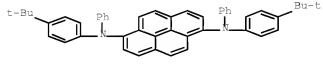


I

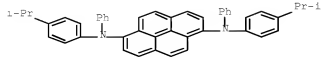
AB This invention pertains to a method for producing (diphenylamino)pyrene derivs. I [wherein R = H, (un)substituted alkyl, aryl, aralkyl, etc.; R' = (un)substituted diphenylamino; q = 1-9; p = 1-9; with limitation of p + q < 10], which are useful as electroluminescent devices. For example, 1,6-dibromopyrene was reacted with 4-isopropyldiphenylamine in toluene in the presence of Pd(OAc)2, t-Bu3P, and t-BuONa to give 1,6-bis(4- isopropyldiphenylamino)pyrene. I were tested as organic electroluminescent devices which have a long life and emit a blue color at a high luminescence efficiency.

IT 722498-84-2P 764657-23-0P 764657-24-1P
764657-25-2P 764657-26-3P 764657-27-4P
RL: IMF (Industrial manufacture); SPN (Synthetic preparation);
PREP (Preparation)
(preparation of bis(diphenylamino)pyrene derivs. as electroluminescent devices)

RN 722498-84-2 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis[4-(1,1-dimethylethyl)phenyl]-N1,N6-diphenyl- (CA INDEX NAME)

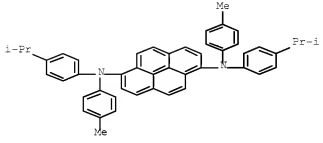


RN 764657-23-0 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis[4-(1-methylethyl)phenyl]-N1,N6-diphenyl- (CA INDEX NAME)

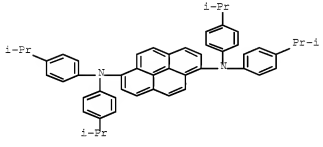


RN 764657-24-1 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis[4-(1-methylethyl)phenyl]-N1,N6-bis(4-

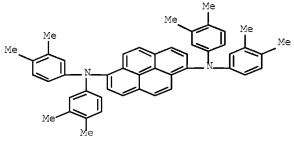
methylphenyl)- (CA INDEX NAME)



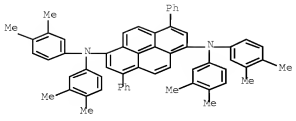
RN 764657-25-2 HCAPLUS
CN 1,6-Pyrenediamine, N1,N1,N6,N6-tetrakis[4-(1-methylethyl)phenyl]- (CA INDEX NAME)



RN 764657-26-3 HCAPLUS
CN 1,6-Pyrenediamine, N1,N1,N6,N6-tetrakis(3,4-dimethylphenyl)- (CA INDEX NAME)



RN 764657-27-4 HCAPLUS
CN 1,6-Pyrenediamine, N1,N1,N6,N6-tetrakis(3,4-dimethylphenyl)-3,8-diphenyl- (CA INDEX NAME)



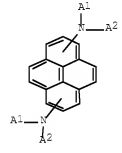
IC ICM C07C211-61
ICS H05B033-14
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 25
IT 722498-84-2P 764657-23-0P 764657-24-1P 764657-25-2P 764657-26-3P 764657-27-4P
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(preparation of bis(diphenylamino)pyrene derivs. as electroluminescent devices)
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 6 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:568210 HCAPLUS Full-text
DOCUMENT NUMBER: 141:131023
TITLE: Organic electroluminescent devices employing blue-emitting dopants based on amine derivatives of pyrene
INVENTOR(S): Seo, Jeong Dae; Lee, Kyung Hoon; Kim, Hee Jung; Park, Chun Gun; Oh, Hyoung Yun
PATENT ASSIGNEE(S): Lg Electronics Inc., S. Korea
SOURCE: Eur. Pat. Appl., 43 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1437395	A2	20040714	EP 2003-29661	2003 1223 <--
EP 1437395	A3	20050831		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
KR 2004057862	A	20040702	KR 2003-20465	2003 0401 <--
US 20040137270	A1	20040715	US 2003-743778	2003 1224 <--
JP 2004204238	A	20040722	JP 2003-428297	2003 1224 <--

JP 3926791	B2	20070606		
CN 1535089	A	20041006	CN 2003-10124405	2003 1224
			<--	
JP 2007027779	A	20070201	JP 2006-245563	2006 0911
			<--	
PRIORITY APPLN. INFO.:			KR 2002-83279 A	2002 1224
			<--	
			KR 2003-20465 A	2003 0401
			<--	
			JP 2003-428297 A3	2003 1224
			<--	

OTHER SOURCE(S): MARPAT 141:131023
ED Entered STN: 16 Jul 2004
GI



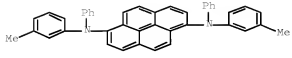
I

AB Organic electroluminescent devices are described which comprise a substrate; a first and second electrodes formed on the substrate; an emitting layer formed between the first electrode and the second electrode, the emitting layer having a plurality of materials one of which being a blue-emitting dopant with general formula (I), where at least one of Al and A2 is selected from a substituted or non-substituted aromatic group, a heterocyclic group, an aliphatic group and hydrogen. The materials forming the emitting layer together with the material of I may have a chemical formula B1-X-B2 where X is selected from a group consisting of naphthalene, anthracene, phenanthrene, pyrene, perylene, and quinoline and at least 1 of the B1 and B2 is selected from a group consisting of aryl, alkylaryl, alkoxyaryl, arylaminoaryl and alkylaminoaryl.

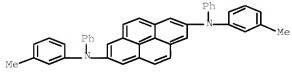
IT 76656-51-4 142141-30-4 163969-53-7
663554-33-4 668019-96-3 722498-77-3
722498-78-4 722498-79-5 722498-80-8
722498-81-9 722498-82-0 722498-83-1
722498-84-2 722498-85-3 722498-86-4
722498-87-5 722498-88-6 722498-89-7
722498-90-0 722498-91-1 722498-92-2
722498-93-3 722498-94-4 722498-95-5
722498-97-7 722498-98-8 722499-00-5
722499-01-6 722499-02-7 722499-03-8
722499-04-9 722499-05-0 722499-06-1
722499-07-2 722499-14-1 722499-15-2
722499-16-3 722499-17-4 722499-18-5
722499-19-6 722499-20-9 722499-21-0

722499-22-1 722499-23-2 722499-24-3
722499-27-6 722499-29-8 722499-30-1
722499-31-2 722499-32-3 722499-33-4
722499-34-5 722499-35-6 722499-36-7
722499-37-8 722499-38-9 722499-39-0
722499-42-5 722499-43-6 722499-44-7
722499-45-8 722499-46-9 722499-47-0
722499-48-1 722499-49-2
RL: DEV (Device component use); MOA (Modifier or additive use);
USES (Uses)
(blue-emitting dopant; organic electroluminescent devices employing blue-emitting dopants based on amine derivs. of pyrene)

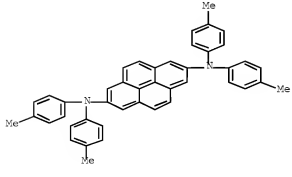
RN 76656-51-4 HCAPLUS
CN 1,6-Pyrenediamine, N,N'-bis(3-methylphenyl)-N,N'-diphenyl- (9CI) (CA INDEX NAME)



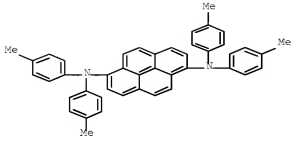
RN 143141-30-4 HCAPLUS
CN 2,7-Pyrenediamine, N,N'-bis(3-methylphenyl)-N,N'-diphenyl- (9CI) (CA INDEX NAME)



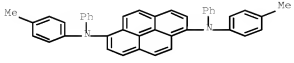
RN 163969-53-7 HCAPLUS
CN 2,7-Pyrenediamine, N,N,N',N'-tetrakis(4-methylphenyl)- (9CI) (CA INDEX NAME)



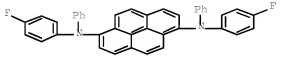
RN 663954-33-4 HCAPLUS
CN 1,6-Pyrenediamine, N1,N1,N6,N6-tetrakis(4-methylphenyl)- (CA INDEX NAME)



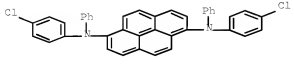
RN 668019-96-3 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis(4-methylphenyl)-N1,N6-diphenyl- (CA INDEX NAME)



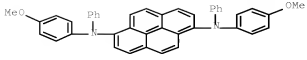
RN 722498-77-3 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis(4-fluorophenyl)-N1,N6-diphenyl- (CA INDEX NAME)



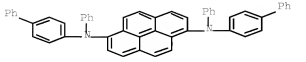
RN 722498-78-4 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis(4-chlorophenyl)-N1,N6-diphenyl- (CA INDEX NAME)



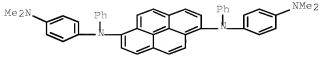
RN 722498-79-5 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis(4-methoxyphenyl)-N1,N6-diphenyl- (CA INDEX NAME)



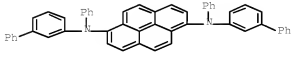
RN 722498-80-8 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis([1,1'-biphenyl]-4-yl)-N1,N6-diphenyl-
(CA INDEX NAME)



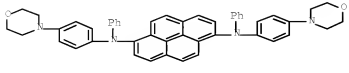
RN 722498-81-9 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis[4-(dimethylamino)phenyl]-N1,N6-
diphenyl- (CA INDEX NAME)



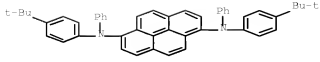
RN 722498-82-0 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis([1,1'-biphenyl]-3-yl)-N1,N6-diphenyl-
(CA INDEX NAME)



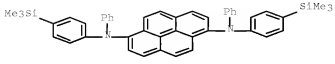
RN 722498-83-1 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis[4-(4-morpholinyl)phenyl]-N1,N6-
diphenyl- (CA INDEX NAME)



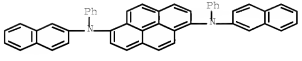
RN 722498-84-2 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis[4-(1,1-dimethylethyl)phenyl]-N1,N6-
diphenyl- (CA INDEX NAME)



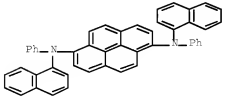
RN 722498-85-3 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-diphenyl-N1,N6-bis[4-(trimethylsilyl)phenyl]- (CA INDEX NAME)



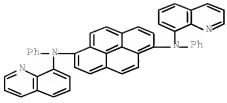
RN 722498-86-4 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-di-2-naphthalenyl-N1,N6-diphenyl- (CA INDEX NAME)



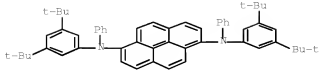
RN 722498-87-5 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-di-1-naphthalenyl-N1,N6-diphenyl- (CA INDEX NAME)



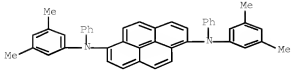
RN 722498-88-6 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-diphenyl-N1,N6-di-8-quinolinyl- (CA INDEX NAME)



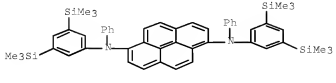
RN 722498-89-7 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis[3,5-bis(1,1-dimethylethyl)phenyl]-N1,N6-diphenyl- (CA INDEX NAME)



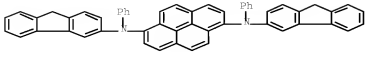
RN 722498-90-0 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis(3,5-dimethylphenyl)-N1,N6-diphenyl- (CA INDEX NAME)



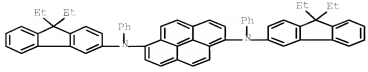
RN 722498-91-1 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis[3,5-bis(trimethylsilyl)phenyl]-N1,N6-diphenyl- (CA INDEX NAME)



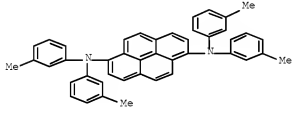
RN 722498-92-2 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-di-9H-fluoren-3-yl-N1,N6-diphenyl- (CA INDEX NAME)



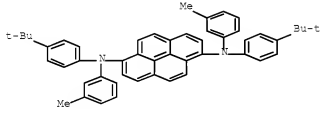
RN 722498-93-3 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis(9,9-diethyl-9H-fluoren-3-yl)-N1,N6-diphenyl- (CA INDEX NAME)



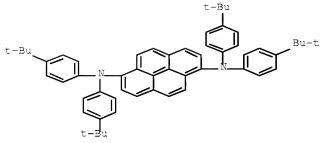
RN 722498-94-4 HCAPLUS
CN 1,6-Pyrenediamine, N1,N1,N6,N6-tetrakis(3-methylphenyl)- (CA INDEX NAME)



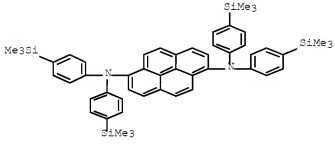
RN 722498-95-5 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis[4-(1,1-dimethylethyl)phenyl]-N1,N6-bis(3-methylphenyl)- (CA INDEX NAME)



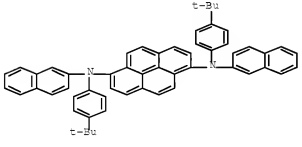
RN 722498-97-7 HCAPLUS
CN 1,6-Pyrenediamine, N1,N1,N6,N6-tetrakis[4-(1,1-dimethylethyl)phenyl]- (CA INDEX NAME)



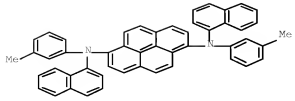
RN 722498-98-8 HCAPLUS
CN 1,6-Pyrenediamine, N1,N1,N6,N6-tetrakis[4-(trimethylsilyl)phenyl]-
(CA INDEX NAME)



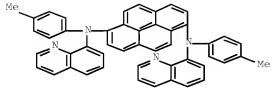
RN 722499-00-5 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis[4-(1,1-dimethylethyl)phenyl]-N1,N6-di-
2-naphthalenyl- (CA INDEX NAME)



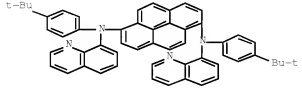
RN 722499-01-6 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis(3-methylphenyl)-N1,N6-di-1-
naphthalenyl- (CA INDEX NAME)



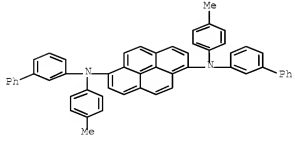
RN 722499-02-7 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis(4-methylphenyl)-N1,N6-di-8-quinolinyl-
(CA INDEX NAME)



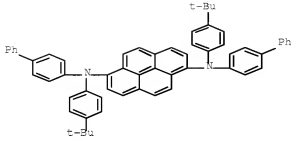
RN 722499-03-8 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis[4-(1,1-dimethylethyl)phenyl]-N1,N6-di-
8-quinolinyl- (CA INDEX NAME)



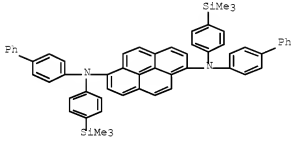
RN 722499-04-9 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis([1,1'-biphenyl]-3-yl)-N1,N6-bis(4-
methylphenyl)- (CA INDEX NAME)



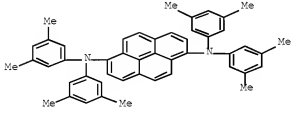
RN 722499-05-0 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis([1,1'-biphenyl]-4-yl)-N1,N6-bis[4-
(1,1-dimethylethyl)phenyl]- (CA INDEX NAME)



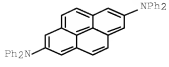
RN 722499-06-1 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis([1,1'-biphenyl]-4-yl)-N1,N6-bis[4-(trimethylsilyl)phenyl]- (CA INDEX NAME)



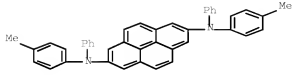
RN 722499-07-2 HCAPLUS
CN 1,6-Pyrenediamine, N1,N1,N6,N6-tetrakis(3,5-dimethylphenyl)- (CA INDEX NAME)



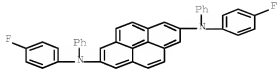
RN 722499-14-1 HCAPLUS
CN 2,7-Pyrenediamine, N2,N2,N7,N7-tetraphenyl- (CA INDEX NAME)



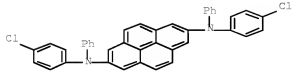
RN 722499-15-2 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-bis(4-methylphenyl)-N2,N7-diphenyl- (CA INDEX NAME)



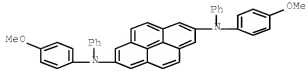
RN 722499-16-3 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-bis(4-fluorophenyl)-N2,N7-diphenyl- (CA INDEX NAME)



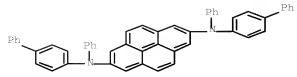
RN 722499-17-4 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-bis(4-chlorophenyl)-N2,N7-diphenyl- (CA INDEX NAME)



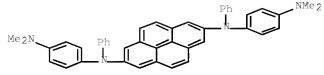
RN 722499-18-5 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-bis(4-methoxyphenyl)-N2,N7-diphenyl- (CA INDEX NAME)



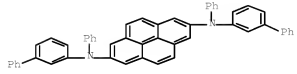
RN 722499-19-6 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-bis([1,1'-biphenyl]-4-yl)-N2,N7-diphenyl- (CA INDEX NAME)



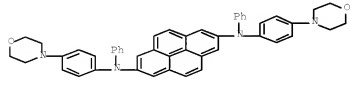
RN 722499-20-9 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-bis[4-(dimethylamino)phenyl]-N2,N7-diphenyl- (CA INDEX NAME)



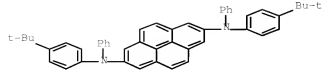
RN 722499-21-0 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-bis([1,1'-biphenyl]-3-yl)-N2,N7-diphenyl- (CA INDEX NAME)



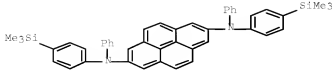
RN 722499-22-1 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-bis[4-(4-morpholinyl)phenyl]-N2,N7-diphenyl- (CA INDEX NAME)



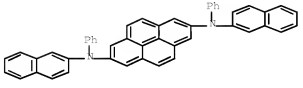
RN 722499-23-2 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-bis[4-(1,1-dimethylethyl)phenyl]-N2,N7-diphenyl- (CA INDEX NAME)



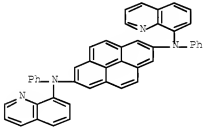
RN 722499-24-3 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-diphenyl-N2,N7-bis[4-(trimethylsilyl)phenyl]- (CA INDEX NAME)



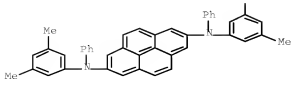
RN 722499-27-6 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-di-2-naphthalenyl-N2,N7-diphenyl- (CA INDEX NAME)



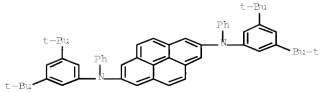
RN 722499-29-8 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-diphenyl-N2,N7-di-8-quinolinyl- (CA INDEX NAME)



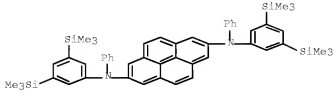
RN 722499-30-1 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-bis(3,5-dimethylphenyl)-N2,N7-diphenyl- (CA INDEX NAME)



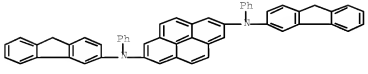
RN 722499-31-2 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-bis[3,5-bis(1,1-dimethylethyl)phenyl]-N2,N7-diphenyl- (CA INDEX NAME)



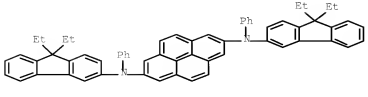
RN 722499-32-3 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-bis[3,5-bis(trimethylsilyl)phenyl]-N2,N7-diphenyl- (CA INDEX NAME)



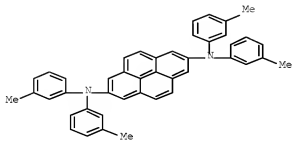
RN 722499-33-4 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-di-9H-fluoren-3-yl-N2,N7-diphenyl- (CA INDEX NAME)



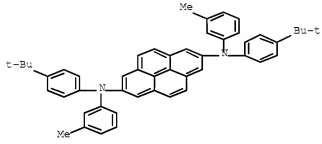
RN 722499-34-5 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-bis(9,9-diethyl-9H-fluoren-3-yl)-N2,N7-diphenyl- (CA INDEX NAME)



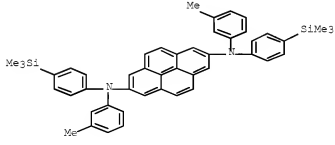
RN 722499-35-6 HCAPLUS
CN 2,7-Pyrenediamine, N2,N2,N7,N7-tetrakis(3-methylphenyl)- (CA INDEX NAME)



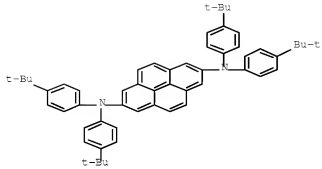
RN 722499-36-7 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-bis[4-(1,1-dimethylethyl)phenyl]-N2,N7-bis(3-methylphenyl)- (CA INDEX NAME)



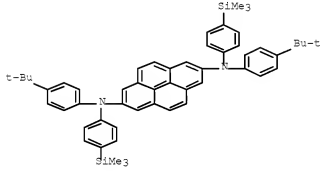
RN 722499-37-8 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-bis(3-methylphenyl)-N2,N7-bis[4-(trimethylsilyl)phenyl]- (CA INDEX NAME)



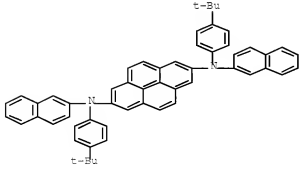
RN 722499-38-9 HCAPLUS
CN 2,7-Pyrenediamine, N2,N2,N7,N7-tetrakis[4-(1,1-dimethylethyl)phenyl]- (CA INDEX NAME)



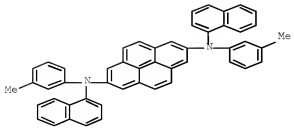
RN 722499-39-0 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-bis[4-(1,1-dimethylethyl)phenyl]-N2,N7-bis[4-(trimethylsilyl)phenyl]- (CA INDEX NAME)



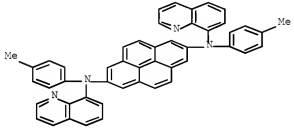
RN 722499-42-5 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-bis[4-(1,1-dimethylethyl)phenyl]-N2,N7-di-2-naphthalenyl- (CA INDEX NAME)



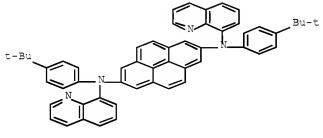
RN 722499-43-6 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-bis(3-methylphenyl)-N2,N7-di-1-naphthalenyl- (CA INDEX NAME)



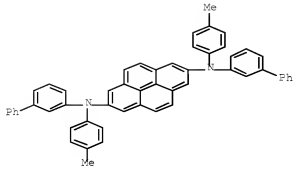
RN 722499-44-7 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-bis(4-methylphenyl)-N2,N7-di-8-quinolinyl-
(CA INDEX NAME)



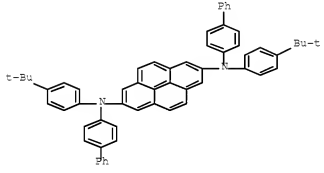
RN 722499-45-8 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-bis[4-(1,1-dimethylethyl)phenyl]-N2,N7-di-
8-quinolinyl- (CA INDEX NAME)



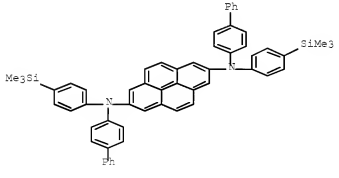
RN 722499-46-9 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-bis([1,1'-biphenyl]-3-yl)-N2,N7-bis(4-
methylphenyl)- (CA INDEX NAME)



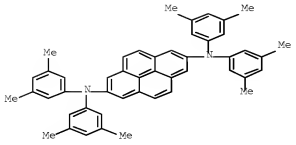
RN 722499-47-0 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-bis([1,1'-biphenyl]-4-yl)-N2,N7-bis[4-(1,1-dimethylethyl)phenyl]- (CA INDEX NAME)



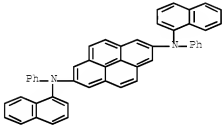
RN 722499-48-1 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-bis([1,1'-biphenyl]-4-yl)-N2,N7-bis[4-(trimethylsilyl)phenyl]- (CA INDEX NAME)



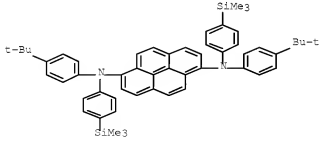
RN 722499-49-2 HCAPLUS
CN 2,7-Pyrenediamine, N2,N2,N7,N7-tetrakis(3,5-dimethylphenyl)- (CA INDEX NAME)



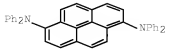
IT 722498-96-6
RL: DEV (Device component use); MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(blue-emitting dopant; organic electroluminescent devices employing blue-emitting dopants based on amine derivs. of pyrene)
RN 722498-96-6 HCAPLUS
CN 2,7-Pyrenediamine, N2,N7-di-1-naphthalenyl-N2,N7-diphenyl- (CA INDEX NAME)



IT 722498-52-4P
RL: DEV (Device component use); MOA (Modifier or additive use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(blue-emitting dopant; organic electroluminescent devices employing blue-emitting dopants based on amine derivs. of pyrene)
RN 722498-52-4 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis[4-(1,1-dimethylethyl)phenyl]-N1,N6-bis[4-(trimethylsilyl)phenyl]- (CA INDEX NAME)



IT 76656-53-6P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(organic electroluminescent devices employing blue-emitting dopants based on amine derivs. of pyrene)
RN 76656-53-6 HCAPLUS
CN 1,6-Pyrenediamine, N1,N1,N6,N6-tetraphenyl- (CA INDEX NAME)



IC ICM C09K011-06
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 22, 25, 76
IT 76656-51-4 143141-30-4 162969-53-7
662954-32-4 668019-96-3 722498-76-2
722498-77-3 722498-78-4 722498-79-5
722498-80-8 722498-81-9 722498-82-0
722498-83-1 722498-84-2 722498-85-3
722498-86-4 722498-87-5 722498-88-6
722498-89-7 722498-90-0 722498-91-1
722498-92-2 722498-93-3 722498-94-4
722498-95-5 722498-97-7 722498-98-8
722498-99-9 722499-00-5 722499-01-6
722499-02-7 722499-03-8 722499-04-9
722499-05-0 722499-06-1 722499-07-2
722499-08-3 722499-09-4 722499-10-7 722499-11-8
722499-12-9 722499-13-0 722499-14-1
722499-15-2 722499-16-3 722499-17-4
722499-18-5 722499-19-6 722499-20-9
722499-21-0 722499-22-1 722499-23-2
722499-24-3 722499-25-4 722499-26-5
722499-27-6 722499-28-7 722499-29-8
722499-30-1 722499-31-2 722499-32-3
722499-33-4 722499-34-5 722499-35-6
722499-36-7 722499-37-8 722499-38-9
722499-39-0 722499-40-3 722499-41-4
722499-42-5 722499-43-6 722499-44-7
722499-45-8 722499-46-9 722499-47-0
722499-48-1 722499-49-2 722499-50-5
722499-51-6 722499-52-7 722499-53-8 722499-54-9
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(blue-emitting dopant; organic electroluminescent devices employing blue-emitting dopants based on amine derivs. of pyrene)
IT 722498-96-6
RL: DEV (Device component use); MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(blue-emitting dopant; organic electroluminescent devices employing blue-emitting dopants based on amine derivs. of pyrene)
IT 722498-52-4P 722498-53-5P 722498-55-7P
RL: DEV (Device component use); MOA (Modifier or additive use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(blue-emitting dopant; organic electroluminescent devices employing blue-emitting dopants based on amine derivs. of

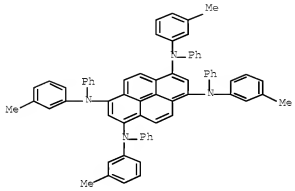
pyrene)
IT 76856-53-6P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(organic electroluminescent devices employing blue-emitting dopants based on amine derivs. of pyrene)

L64 ANSWER 7 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:217178 HCAPLUS Full-text
DOCUMENT NUMBER: 140:261500
TITLE: Pyrenes as dopants for green-emitting organic electroluminescent devices and displays
INVENTOR(S): Toyama, Wataru; Sato, Hiroyuki; Matsuura, Azuma; Narisawa, Toshiaki
PATENT ASSIGNEE(S): Fujitsu Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 43 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

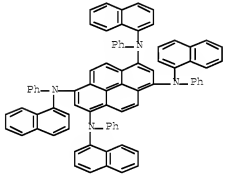
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004083507	A	20040318	JP 2002-248378	2002 0828
			<--	
JP 4060669	B2	20080312		
KR 2004019885	A	20040306	KR 2003-54519	2003 0807
			<--	
TW 252056	B	20060321	TW 2003-92121616	2003 0807
			<--	
US 20040053069	A1	20040318	US 2003-636580	2003 0808
			<--	
EP 1403354	A1	20040331	EP 2003-18120	2003 0808
			<--	
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1487778	A	20040407	CN 2003-153303	2003 0808
			<--	
PRIORITY APPLN. INFO.:			JP 2002-248378 A	2002 0828
			<--	

OTHER SOURCE(S): MARPAT 140:261500
ED Entered STN: 18 Mar 2004
AB The pyrenes have substituents NR1R2 (R1, R2 = H, substituent) on position 1, 3, 6, and 8. The devices and displays have high green luminescence intensity and efficiency.
IT 671212-46-7P 671212-47-8P 671212-48-9P
RL: DEV (Device component use); IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(manufacture of 1,3,6,8-substituted pyrenes as dopants for green-emitting organic electroluminescent devices and displays)
RN 671212-46-7 HCAPLUS

CN 1,3,6,8-Pyrenetetramine, N1,N3,N6,N8-tetrakis(3-methylphenyl)-N1,N3,N6,N8-tetraphenyl- (CA INDEX NAME)

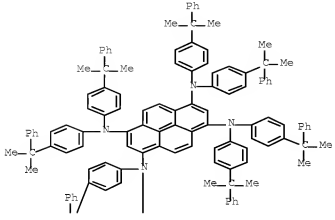


RN 671212-47-8 HCAPLUS
CN 1,3,6,8-Pyrenetetramine, N1,N3,N6,N8-tetra-1-naphthalenyl-N1,N3,N6,N8-tetraphenyl- (CA INDEX NAME)

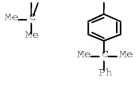


RN 671212-48-9 HCAPLUS
CN Benzo[def]phenanthrene-1,3,6,8-tetramine, N1,N1,N3,N3,N6,N6,N8,N8-octakis[4-(1-methyl-1-phenylethyl)phenyl]- (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



IC ICM C07C211-61
ICS C09K011-06; H05B033-14; H05B033-22
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 25, 73
IT 671212-46-7P 671212-47-8P 671212-48-9P
RL: DEV (Device component use); IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(manufacture of 1,3,6,8-substituted pyrenes as dopants for green-emitting organic electroluminescent devices and displays)

L64 ANSWER 8 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:198497 HCAPLUS Full-text
DOCUMENT NUMBER: 140:225545
TITLE: Phenylanthracenes for blue-emitting organic electroluminescent devices having high luminescent intensity and efficiency
INVENTOR(S): Kawamura, Hisayuki
PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 24 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004075580	A	20040311	JP 2002-235538	

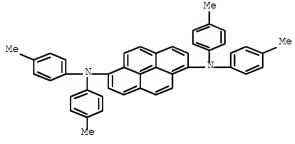
2002
0813

<--

JP 4065161 B2 20080319
PRIORITY APPLN. INFO.: JP 2002-235538
2002
0813

<--

OTHER SOURCE(S): MARPAT 140:225545
ED Entered STN: 11 Mar 2004
AB The phenylanthracenes are A1LA2 (I) (A1, A2 = phenylanthryl, diphenylanthryl; L = C≥8 polycyclic alicyclic group; A1 and A2 link via different atoms of L). Organic electroluminescent devices have emitter or hole-transporting layers containing I.
IT 663954-33-4
RL: DEV (Device component use); MOA (Modifier or additive use);
USES (Uses)
(dopants; polycyclic alicyclic compds. bearing phenylanthracene groups as emitters or hole transporting materials for blue-emitting organic electroluminescent devices)
RN 663954-33-4 HCAPLUS
CN 1,6-Pyrenediamine, N1,N1,N6,N6-tetrakis(4-methylphenyl)- (CA INDEX NAME)



IC ICM C07C013-615
ICS C09K011-06; H05B033-14; H05B033-22
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 25
IT 154853-83-5 663954-33-4
RL: DEV (Device component use); MOA (Modifier or additive use);
USES (Uses)
(dopants; polycyclic alicyclic compds. bearing phenylanthracene groups as emitters or hole transporting materials for blue-emitting organic electroluminescent devices)

L64 ANSWER 9 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:182957 HCAPLUS Full-text
DOCUMENT NUMBER: 140:243296
TITLE: Organic electroluminescent devices and organic luminescent medium
INVENTOR(S): Matsuura, Masahide; Funahashi, Masakazu; Fukuoka, Kenichi; Hosokawa, Chishio
PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan
SOURCE: PCT Int. Appl., 77 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

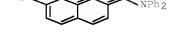
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004018588	A1	20040304	WO 2003-JP8463	2003 0703
			<--	
W: CN, JP, KR RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
EP 1541657	A1	20050615	EP 2003-738656	2003 0703
			<--	
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
CN 1668719	A	20050914	CN 2003-817301	2003 0703
			<--	
CN 1842234	A	20061004	CN 2006-10067808	2003 0703
			<--	
CN 101068041	A	20071107	CN 2007-10101150	2003 0703
			<--	
TW 278248	B	20070401	TW 2003-92118623	2003 0708
			<--	
US 20050064233	A1	20050324	US 2003-617397	2003 0711
			<--	
US 20060033421	A1	20060216	US 2005-207933	2005 0822
			<--	
US 20070237984	A1	20071011	US 2007-761437	2007 0612
			<--	
PRIORITY APPLN. INFO.:			JP 2002-211308 A	2002 0719
			<--	
			CN 2003-817301 A3	2003 0703
			<--	
			WO 2003-JP8463 W	2003 0703
			<--	
			US 2003-617397 A3	2003 0711
			<--	
			US 2005-207933 A1	2005 0822

OTHER SOURCE(S): MARPAT 140:243296
ED Entered STN: 05 Mar 2004

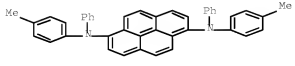
AB An organic electroluminescent device comprises a pair of electrodes and an organic luminescent medium layer which is placed between the electrodes and contains (A) a specific arylamine and (B) at least one compound selected from among specific anthracene derivs., spiro fluorene derivs., fused-ring compds., and metal complexes; and an organic luminescent medium containing the components (A) and (B). The organic electroluminescent device exhibits high color purity, excellent heat resistance and a long lifetime and emits blue to yellow light at high efficiency, and the organic luminescent medium is suitable for use in such devices.

IT 76656-53-6 668019-96-3 668020-20-0
668020-26-6 668020-53-9 668020-61-9
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent devices and organic luminescent medium)

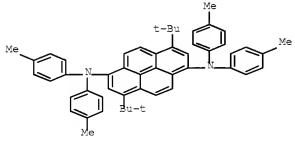
RN 76656-53-6 HCAPLUS
CN 1,6-Pyrenediamine, N1,N1,N6,N6-tetraphenyl- (CA INDEX NAME)



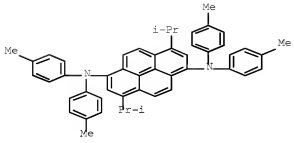
RN 668019-96-3 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis(4-methylphenyl)-N1,N6-diphenyl- (CA INDEX NAME)



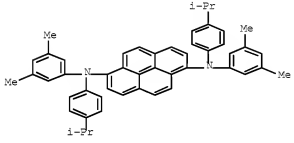
RN 668020-20-0 HCAPLUS
CN 1,6-Pyrenediamine, 3,8-bis(1,1-dimethylethyl)-N1,N1,N6,N6-tetrakis(4-methylphenyl)- (CA INDEX NAME)



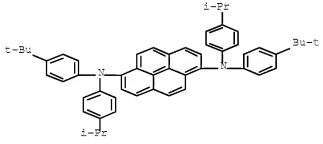
RN 668020-26-6 HCAPLUS
CN 1,6-Pyrenediamine, 3,8-bis(1-methylethyl)-N1,N1,N6,N6-tetrakis(4-methylphenyl)- (CA INDEX NAME)



RN 668020-53-9 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis(3,5-dimethylphenyl)-N1,N6-bis[4-(1-methylethyl)phenyl]- (CA INDEX NAME)



RN 668020-61-9 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis[4-(1,1-dimethylethyl)phenyl]-N1,N6-bis[4-(1-methylethyl)phenyl]- (CA INDEX NAME)



IC ICM C09K011-06
ICS H05B033-14; H05B033-22
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 25, 74
IT 76856-53-6 122648-99-1 131625-67-7 171408-93-8
172285-79-9 172285-83-5 220721-68-6 244281-01-4
279672-22-9 349666-25-7 400606-81-7 475461-15-5
668019-24-7 668019-64-5 668019-76-9 668019-95-3
668020-07-3 668020-14-2 668020-20-0
668020-26-6 668020-28-8 668020-34-6 668020-39-1

668020-46-0 668020-53-9 668020-61-9
668020-67-5 668020-74-4 668020-81-3 668020-88-0
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent devices and organic luminescent medium)

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 10 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:162657 HCAPLUS Full-text
DOCUMENT NUMBER: 140:225502
TITLE: Oligoarylene derivatives for organic electroluminescent devices
INVENTOR(S): Ikeda, Hidetsugu; Matsuura, Masahide; Kawamura, Hisayuki
PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan
SOURCE: PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004016575	A1	20040226	WO 2003-JP10071	2003 0807
			<--	
W: CN, KR, US				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
JP 2004075567	A	20040311	JP 2002-234833	2002 0812
			<--	
EP 1533290	A1	20050525	EP 2003-788055	2003 0807
			<--	
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
CN 1675149	A	20050928	CN 2003-819058	2003 0807
			<--	
TW 287408	B	20070921	TW 2003-92122023	2003 0811
			<--	
US 20060134456	A1	20060622	US 2005-522546	2005 0127
			<--	
PRIORITY APPLN. INFO.:			JP 2002-234833 A	2002 0812
			<--	
			WO 2003-JP10071 W	2003 0807
			<--	

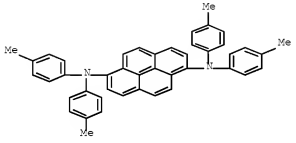
OTHER SOURCE(S): MARPAT 140:225502
ED Entered STN: 29 Feb 2004
AB The invention relates to oligoarylene derivs. represented by Ar1-Ch-Ar2, Ch1-L-Ch2, Ar3-(L1)a-Ch3-(L2)b-Ar4, and Ar5-Ch4-(Ar7)n-L3-(Ar8)m-Ch5-Ar6(1) [Ch, Ch1 and Ch2 =

C14-20 condensed aromatic ring; Ch3, Ch4 and Ch5 = C14-20 arylene group; Ar1-6 = aryl group containing 5-30 atoms; Ar7 and Ar8 = arylene group containing 5-30 atoms; L1-3 = connecting group; and a, b, n and m = 0 or 1]. The oligoarylene derivs. are suited for use as a host material of a blue electroluminescent material in an organic electroluminescent device.

IT 663954-33-4P
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(oligoarylene derivs. for organic electroluminescent devices)

RN 663954-33-4 HCAPLUS

CN 1,6-Pyrenediamine, N1,N1,N6,N6-tetrakis(4-methylphenyl)- (CA INDEX NAME)



IC ICM C07C015-62
ICS C09K011-06; H05B033-14; H05B033-22

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 25

IT 154853-83-5P 663954-28-7P 663954-29-8P 663954-30-1P 663954-32-3P 663954-33-4P
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(oligoarylene derivs. for organic electroluminescent devices)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 11 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:673843 HCAPLUS Full-text

DOCUMENT NUMBER: 139:221355

TITLE: Diaminonaphthalene compounds and their organic electroluminescent devices having long luminescence life and durability

INVENTOR(S): Totani, Yoshiyuki; Shimamura, Takehiko; Ishida, Tsutomu; Tanabe, Yoshimitsu; Nakatsuka, Masakatsu

PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

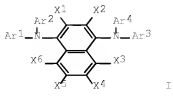
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003238502	A	20030827	JP 2002-36418	2002 0214

<--
PRIORITY APPLN. INFO.: JP 2002-36418
2002
0214
<--
OTHER SOURCE(S): MARPAT 139:221355
ED Entered STN: 28 Aug 2003
GI



I

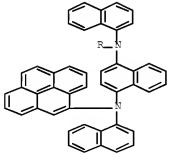
AB The diaminonaphthalene compds. are represented by general formula of I [Ar1-Ar4 = (un)substituted aryl, ≥1 of Ar1-Ar4 = condensed aromatic hydrocarbyl; X1-X6 = H, OnZ; Z = (halogen-substituted) alkyl, aryl; n = 0, 1]. The organic EL device has ≥1 layers containing I, maybe in a hole injection-transporting layer or a luminescent layer.

IT 586414-46-2P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(diaminonaphthalene compds. for hole injection-transporting layers or luminescent layers of organic EL devices having long luminescence life and durability)

RN 586414-46-2 HCAPLUS

CN 1,4-Naphthalenediamine, N1,N1,N4-tri-1-naphthalenyl-N4-4-pyrenyl- (CA INDEX NAME)

PAGE 1-A



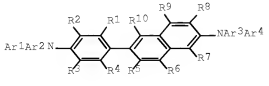
PAGE 2-A

IC ICM C07C211-57
ICS C07C211-61; C09K011-06; H05B033-14; H05B033-22
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 25
IT 244280-93-1P 244280-97-5P 586414-40-6P 586414-41-7P
586414-42-8P 586414-43-9P 586414-44-0P 586414-45-1P
586414-46-2P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(diaminonaphthalene compds. for hole injection-transporting layers or luminescent layers of organic EL devices having long luminescence life and durability)

L64 ANSWER 12 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:239844 HCAPLUS Full-text
DOCUMENT NUMBER: 138:278159
TITLE: Aromatic amine and organic electroluminescent device using the amine
INVENTOR(S): Totani, Yoshiyuki; Shimamura, Takehiko; Ishida, Tsutomu; Tanabe, Yoshimitsu; Nakatsuka, Masakatsu
PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003089682	A	20030328	JP 2001-285020	2001 0919
			<--	
PRIORITY APPLN. INFO.:			JP 2001-285020	2001 0919
			<--	

OTHER SOURCE(S): MARPAT 138:278159
ED Entered STN: 28 Mar 2003
GI

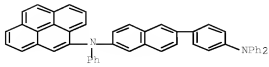


I

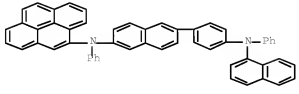
AB The amine is that represented as I [Ar1-Ar4 = (substituted) aryl; R1-R10 = H, halogen, (O)nZ; Z = (halogen-substituted) linear, branched, or cyclic alkyl, (substituted) aryl; n = 0, 1]. The electroluminescent device is that having ≥1 layer containing I, preferably as a pos. hole-transporting layer or a light-emitting layer, sandwiched between a pair of electrodes.
IT 503299-14-7P 503299-15-8P 503299-16-9P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(aromatic amine for pos. hole-transporting layer or light-emitting

layer in organic electroluminescent device)

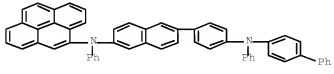
RN 503299-14-7 HCAPLUS
CN 4-Pyrenamine, N-[6-[4-(diphenylamino)phenyl]-2-naphthalenyl]-N-phenyl- (CA INDEX NAME)



RN 503299-15-8 HCAPLUS
CN 4-Pyrenamine, N-[6-[4-(1-naphthalenylphenylamino)phenyl]-2-naphthalenyl]-N-phenyl- (CA INDEX NAME)



RN 503299-16-9 HCAPLUS
CN 4-Pyrenamine, N-[6-[4-([1,1'-biphenyl]-4-ylphenylamino)phenyl]-2-naphthalenyl]-N-phenyl- (CA INDEX NAME)



IC ICM C07C211-57
ICS C07C211-58; C07C211-61; C09K011-06; H05B033-14; H05B033-22
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 25
IT 503299-09-0P 503299-10-3P 503299-11-4P 503299-12-5P
503299-13-6P 503299-14-7P 503299-15-8P
503299-16-9P 503299-17-0P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(aromatic amine for pos. hole-transporting layer or light-emitting layer in organic electroluminescent device)

L64 ANSWER 13 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:964695 HCAPLUS Full-text
DOCUMENT NUMBER: 138:47036
TITLE: Organic electroluminescence device with gallium quinolinato complex and styryl arylene host
INVENTOR(S): Hosokawa, Chishio; Funahashi, Masakazu; Sakai, Toshio; Arakane, Takashi; Yamamoto, Hiroshi

PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan
SOURCE: PCT Int. Appl., 73 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002102118	A1	20021219	WO 2002-JP4427	20020507
			<--	
W: CN, IN, JP, KR RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
EP 1404160	A1	20040331	EP 2002-724697	20020507
			<--	
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
CN 1513283	A	20040714	CN 2002-811332	20020507
			<--	
JP 4029071	B2	20080109	JP 2003-504716	20020507
			<--	
US 20030077480	A1	20030424	US 2002-141982	20020510
			<--	
TW 286911	B	20070911	TW 2002-91109908	20020513
			<--	
US 20050227111	A1	20051013	US 2004-935102	20040908
			<--	
US 7087322	B2	20060808		
US 20060257687	A1	20061116	US 2006-480469	20060705
			<--	
PRIORITY APPLN. INFO.:			JP 2001-170960 A	20010606
			<--	
			WO 2002-JP4427 W	20020507
			<--	
			US 2002-141982 B1	20020510
			<--	
			US 2004-935102 A3	20040908

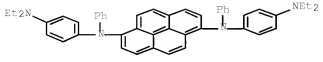
ED Entered STN: 20 Dec 2002

AB The invention refers to an organic electroluminescence device comprising at least one organic thin-film layer with a laminate containing a metal complex with energy gap > 2.8 eV, and a host material layer. The electroluminescence device exhibits a high luminance and has high emission efficiency and a long life.

IT 478702-59-9
RL: DEV (Device component use); USES (Uses)
(organic electroluminescence device with gallium quinolinato complex and styryl arylene host)

RN 478702-59-9 HCAPLUS

CN 1,6-Pyrenediamine, N1,N6-bis[4-(diethylamino)phenyl]-N1,N6-diphenyl- (CA INDEX NAME)



IC ICM H05B033-22
ICS H05B033-14; C09K011-06

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

IT 23102-67-2 186412-15-7 221453-38-9 279672-58-1 403671-71-6 403671-73-8 478702-59-9 478702-60-2
RL: DEV (Device component use); USES (Uses)
(organic electroluminescence device with gallium quinolinato complex and styryl arylene host)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 14 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:595531 HCAPLUS Full-text

DOCUMENT NUMBER: 137:161221

TITLE: 3,6,9-trisubstituted carbazoles for light emitting diodes

INVENTOR(S): Lin, Jiann T'suen; Thomas, K. R. Justin; Tao, Yu-tai; Ko, Chung-wen

PATENT ASSIGNEE(S): Academia Sinica, Taiwan

SOURCE: U.S. Pat. Appl. Publ., 10 pp.
CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

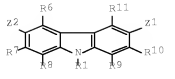
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20020107405	A1	20020808	US 2001-990576	2001 1121
			<--	
US 6649772	B2	20031118		
PRIORITY APPLN. INFO.:			US 2000-252804P P	2000 1122
			<--	

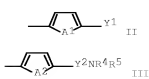
OTHER SOURCE(S): MARPAT 137:161221

ED Entered STN: 09 Aug 2002

GI



I

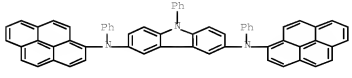


III

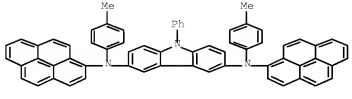
AB Compds. are described by the general formula I (Z1 and Z2 = independently selected - N(R2)R3, II, and III; A1 and A2 = independently selected S, O, NR, or CH:CH; Y1, Y2 and R1-5 = independently selected aryl or heteroaryl groups; R6-11 = independently selected H, Cl, alkyl, OR, NRR', COR, or C(O)OR; and R and R' = independently selected H or alkyl). Electroluminescent devices employing the compds. in hole-transporting and/or light-emitting layers are also described.

IT 340162-05-2P 340162-07-4P 340162-08-5P
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(carbazole derivs. and light-emitting diodes using them)

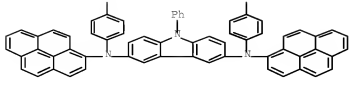
RN 340162-05-2 HCAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6,9-triphenyl-N3,N6-di-1-pyrenyl- (CA INDEX NAME)



RN 340162-07-4 HCAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6-bis(4-methylphenyl)-9-phenyl-N3,N6-di-1-pyrenyl- (CA INDEX NAME)



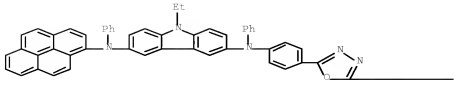
RN 340162-08-5 HCAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6-bis(4-methoxyphenyl)-9-phenyl-N3,N6-di-1-pyrenyl- (CA INDEX NAME)



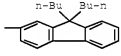
IC ICM C07D209-94
INCL 548439000
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 27, 76
IT 340162-05-2P 340162-07-4P 340162-08-5P
410547-39-6P
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(carbazole derivs. and light-emitting diodes using them)

L64 ANSWER 15 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:587825 HCAPLUS Full-text
DOCUMENT NUMBER: 137:301792
TITLE: Green and Yellow Electroluminescent Dipolar Carbazole Derivatives: Features and Benefits of Electron-Withdrawing Segments
AUTHOR(S): Thomas, K. R. Justin; Lin, Jiann T.; Tao, Yu-Tai; Chuen, Chang-Hao
CORPORATE SOURCE: Institute of Chemistry, Academia Sinica, Nankang, 115, Taiwan
SOURCE: Chemistry of Materials (2002), 14(9), 3852-3859
CODEN: CMATEX; ISSN: 0897-4756
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 08 Aug 2002
AB New multiply substituted carbazole derivs. containing fluorene or phenylene conjugated oxadiazole segments and quinoxaline units were obtained by Pd-catalyzed C-N coupling reactions. They are amorphous with the glass transition temperature (Tg) in the range 104-176°. The emission color of the materials varies from blue to yellow and is dependent on the nature of the electron-withdrawing segments and solvents. Two reversible 1-electron oxidns. were observed for these mols. in cyclic voltammograms, which originate from the peripheral 3,6-diarylamino units in the 3,6,9-trisubstituted derivs. and diarylamine and carbazole segments in the 3,9-disubstituted compds. Redns. originating from quinoxaline segments were also located for the mols. incorporating quinoxaline moieties. The double-layer organic light-emitting diodes fabricated using these compds. as hole-transporting/emitting layers and TPBI or Alq3 as an electron-transporting layer emit bluish green to yellow colors. The recombination zone is restricted in the HTL layer for the quinoxaline-containing mols. irresp. of the electron-transporting layer used and emission occurs from them. However, for the oxadiazole derivs. emission in the Alq3-based devices is either red shifted or resembles that of Alq3. Cyclic voltammetric and spectroscopic data support more pronounced electron affinity for the quinoxaline-incorporated carbazole derivs. than for the oxadiazole-tethered carbazole materials.
IT 468062-31-9P
RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation); USES (Uses)
(green and yellow electroluminescent dipolar carbazole derivs. and their electrochem. and spectral and luminescent properties affected by electron-withdrawing segments)
RN 468062-31-9 HCAPLUS
CN 9H-Carbazole-3,6-diamine, N3-[4-[5-(9,9-dibutyl-9H-fluoren-2-yl)-1,3,4-oxadiazol-2-yl]phenyl]-9-ethyl-N3,N6-diphenyl-N6-1-pyrenyl- (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

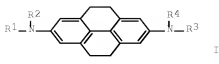


CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 22, 72, 76
IT 468062-26-2P 468062-27-3P 468062-28-4P 468062-29-5P 468062-30-8P 468062-31-9P 468062-32-0P
RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation); USES (Uses)
(green and yellow electroluminescent dipolar carbazole derivs. and their electrochem. and spectral and luminescent properties affected by electron-withdrawing segments)
REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 16 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:538511 HCAPLUS Full-text
DOCUMENT NUMBER: 137:101222
TITLE: Hole transport compound and organic thin film luminescent component
INVENTOR(S): Ito, Yuichi
PATENT ASSIGNEE(S): Toppan Printing Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002203685	A	20020719	JP 2000-399866	2000 1228
			<--	
JP 4061840	B2	20080319		
PRIORITY APPLN. INFO.:			JP 2000-399866	2000 1228
			<--	
OTHER SOURCE(S):		MARPAT 137:101222		

ED Entered STN: 19 Jul 2002
GI

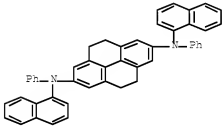


I

AB The invention refers to a tetrahydropyrene hole transport compound I [R1-2 = Ph, tolyl, naphthyl, biphenyl, 9,9-dimethylfluorene-2-yl, or 4,5,9,10-tetrahydropyrene; and R1,2 and/or R3,4 may be connected and contain at least one carbazoyl or iminobenzyl, and the unconnected Rn = Ph, tolyl, naphthyl, biphenyl, 9,9-dimethylfluorene-2-yl, or 4,5,9,10-tetrahydropyrene] with heat resistance properties.

IT 403671-76-1P
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(hole transport compound and organic thin film luminescent component)

RN 403671-76-1 HCAPLUS
CN 2,7-Pyrenediamine, 4,5,9,10-tetrahydro-N2,N7-di-1-naphthalenyl-N2,N7-diphenyl- (CA INDEX NAME)



IC ICM H05B033-22
ICS C07C211-61; H05B033-14
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
IT 403671-76-1P
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(hole transport compound and organic thin film luminescent component)

L64 ANSWER 17 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:313483 HCAPLUS Full-text
DOCUMENT NUMBER: 136:332524
TITLE: Organic electroluminescent devices
INVENTOR(S): Hosokawa, Chishio; Funahashi, Masakazu
PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

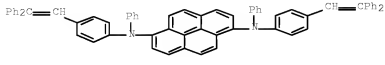
JP 2002124385	A	20020426	JP 2000-319265	2000 1019

<--

PRIORITY APPLN. INFO.: JP 2000-319265 2000 1019

<--

OTHER SOURCE(S): MARPAT 136:332524
ED Entered STN: 26 Apr 2002
AB The devices comprise a pair of electrodes interposing an organic electroluminescent laminate containing a phosphor layer comprising a polyarom. hydrocarbon ring.
IT 415683-11-3
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent devices)
RN 415683-11-3 HCAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis[4-(2,2-diphenylethenyl)phenyl]-N1,N6-diphenyl- (CA INDEX NAME)



IC ICM H05B033-14
ICS C07C013-40; C07C013-615; C09B048-00; C09K011-06
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
IT 2085-33-8, Tris(8-quinolinolato)aluminum 7439-93-2, Lithium, uses 50926-11-9, ITO 65181-78-4, TPD 123847-85-8, α-NPD 274256-88-1 415683-03-3 415683-04-4 415683-05-5 415683-06-6 415683-07-7 415683-08-8 415683-09-9 415683-10-2 415683-11-3 415683-13-5
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent devices)

L64 ANSWER 18 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:273085 HCAPLUS Full-text
DOCUMENT NUMBER: 136:316695
TITLE: Organic electroluminescent device
INVENTOR(S): Agata, Takashi; Okuda, Daisuke; Yoneyama, Hiroto; Seki, Mieko; Mashimo, Kiyokazu; Hirose, Eiichi; Sato, Katsuhiro; Nukada, Katsuki
PATENT ASSIGNEE(S): Fuji Xerox Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002110360	A	20020412	JP 2000-303696	2000 1003

<--

PRIORITY APPLN. INFO.: JP 2000-303696

2000
1003

<--

ED Entered STN: 12 Apr 2002
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT
*

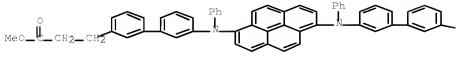
AB The invention relates to an organic electroluminescent device comprising the hole transporting material represented by I and II [R1-3 = H, alkyl, alkoxy, etc.; R4 = H, alkyl, aryl, etc.; X = divalent aromatic group; T = C1-10 divalent normal or branched hydrocarbon group; k = 0 or 1].

IT 409115-13-5
RL: DEV (Device component use); USES (Uses)
(hole transporting material; organic electroluminescent device)

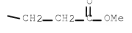
RN 409115-13-5 HCAPLUS

CN [1,1'-Biphenyl]-3-propanoic acid, 3',3'''-[1,6-pyrenediylbis(phenylimino)]bis-, dimethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



IC ICM H05B033-22
ICS C09K011-06; H05B033-14

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 25

IT 409115-12-4 409115-13-5 409115-14-6 409115-15-7
RL: DEV (Device component use); USES (Uses)
(hole transporting material; organic electroluminescent device)

L64 ANSWER 19 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:185057 HCAPLUS Full-text

DOCUMENT NUMBER: 136:238791

TITLE: Novel arylamine compounds and organic electroluminescent devices

INVENTOR(S): Hosokawa, Chishio; Funahashi, Masakazu

PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan

SOURCE: PCT Int. Appl., 44 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002020460	A1	20020314	WO 2001-JP7477	20010830
			<--	
W: CN, IN, KR RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
JP 2002080433	A	20020319	JP 2000-268833	20000905
			<--	
JP 3998903	B2	20071031		
EP 1219590	A1	20020703	EP 2001-961205	20010830
			<--	
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
CN 1775737	A	20060524	CN 2005-10109955	20010830
			<--	
US 20020137969	A1	20020926	US 2001-945633	20010905
			<--	
US 6515182	B2	20030204		
IN 2002CN00656	A	20071221	IN 2002-CN656	20020503
			<--	
KR 831510	B1	20080522	KR 2002-705857	20020506
			<--	
US 20030018218	A1	20030123	US 2002-193323	20020712
			<--	
US 6657084	B2	20031202		
US 20040054232	A1	20040318	US 2003-658417	20030910
			<--	
US 7081550	B2	20060725		
US 20060186799	A1	20060824	US 2006-406400	20060419
			<--	
IN 2006CN02746	A	20070608	IN 2006-CN2746	20060725
			<--	
JP 2007266620	A	20071011	JP 2007-131496	20070517
			<--	
KR 2007118709	A	20071217	KR 2007-727193	20071122
			<--	
PRIORITY APPLN. INFO.:			JP 2000-268833 A	20000

0905

<--

CN 2001-802631 A3

2001

0830

<--

WO 2001-JP7477 W

2001

0830

<--

US 2001-945633 A3

2001

0905

<--

IN 2002-CN656 A3

2002

0503

<--

KR 2002-705857 A3

2002

0506

<--

US 2002-193323 A1

2002

0712

<--

US 2003-658417 A1

2003

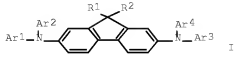
0910

<--

OTHER SOURCE(S): MARPAT 136:238791

ED Entered STN: 15 Mar 2002

GI



I

AB Novel arylamine compds. I, and an organic electroluminescent device whose organic compound layer contains a novel arylamine compound described above: I (wherein R1 and R2 are each independently alkyl, alkoxy, aryl, arylalkyl, or aryloxy; and Ar1 to Ar4 may be each independently aryl or a heterocyclic group, but at least 2 of Ar1 to Ar4 must be each m-biphenyl or aryl-substituted biphenyl with the remainder being each biphenyl, provided that when the aryl-substituted biphenyl is di-aryl-substituted biphenyl, the remainder are each aryl). The invention provides organic electroluminescent devices exhibiting high luminance, high heat resistance, long lifetime and high light emitting efficiency, and novel arylamine compds. capable of realizing such electroluminescent devices.

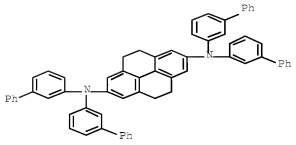
IT 403671-75-0 403671-76-1

RL: DEV (Device component use); USES (Uses)

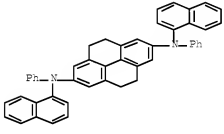
(novel arylamine compds. and organic electroluminescent devices)

RN 403671-75-0 HCAPLUS

CN 2,7-Pyrenediamine, N2,N2,N7,N7-tetrakis([1,1'-biphenyl]-3-yl)-4,5,9,10-tetrahydro- (CA INDEX NAME)



RN 403671-76-1 HCAPLUS
CN 2,7-Pyrenediamine, 4,5,9,10-tetrahydro-N2,N7-di-1-naphthalenyl-N2,N7-diphenyl- (CA INDEX NAME)



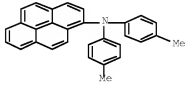
IC ICM C07C211-61
ICS C07C225-22; C09K011-06; H05B033-14; H05B033-22
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 25
IT 2085-33-8, Tris(8-quinolinolato)aluminum 7439-93-2, Lithium, uses 50926-11-9, ITO 65181-78-4, TPD 403671-75-0
403671-76-1 403671-77-2 403671-78-3 403671-79-4
RL: DEV (Device component use); USES (Uses)
(novel arylamine compds. and organic electroluminescent devices)
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 20 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:47845 HCAPLUS Full-text
DOCUMENT NUMBER: 136:126476
TITLE: Purification of material for electronic use using activated clay, and purified product
INVENTOR(S): Abe, Katsumi; Nishimura, Tomonori; Watanabe, Takanobu; Suzuka, Susumu
PATENT ASSIGNEE(S): Hodogaya Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

JP 2002014478 A 20020118 JP 2000-199334 2000 0630
<--
US 20030050489 A1 20030313 US 2001-893684 2001 0629
<--
US 6858161 B2 20050222
PRIORITY APPLN. INFO.: JP 2000-199334 A 2000 0630
<--

ED Entered STN: 18 Jan 2002
AB Purification of the material or its intermediate for electronic use, e.g. electrophotog. photoreceptors and electroluminescent materials, is carried out by dissolving it in an organic solvent, followed by contacting with activated clay at 65-200°, preferably at 80-130°. The purified material gives highly sensitive electronic apparatus
IT 131625-67-7P
RL: DEV (Device component use); PUR (Purification or recovery); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(charge-transporting agent; purification of material for electronic use using activated clay)
RN 131625-67-7 HCAPLUS
CN 1-Pyrenamine, N,N-bis(4-methylphenyl)- (CA INDEX NAME)



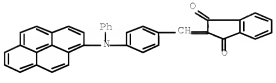
IC ICM G03G005-00
ICS B01D015-00; B01J020-12; G03G005-06; C09K011-06
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 73
IT 20440-95-3P 65181-78-4P 82532-76-1P 83992-95-4P
89114-90-9P 89114-91-0P 89115-11-7P 106614-59-9P
119344-18-2P 122738-25-4P 124373-59-7P 129119-41-1P
129119-42-2P 131625-67-7P 132571-92-7P 148077-51-4P
167218-46-4P 169685-34-1P 178477-02-6P 178477-07-1P
204326-97-6P 389867-91-8P 389867-92-9P
RL: DEV (Device component use); PUR (Purification or recovery); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(charge-transporting agent; purification of material for electronic use using activated clay)

L64 ANSWER 21 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:932596 HCAPLUS Full-text
DOCUMENT NUMBER: 136:61299
TITLE: Electroluminescent device using styrylamines
INVENTOR(S): Arai, Kazumi
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 33 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001354955	A	20011225	JP 2000-177761	2000 0614
			<--	
JP 4076709	B2	20080416		
PRIORITY APPLN. INFO.:			JP 2000-177761	2000 0614
			<--	

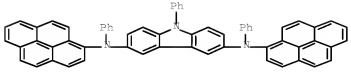
OTHER SOURCE(S): MARPAT 136:61299
ED Entered STN: 27 Dec 2001
AB The invention relates to a red-emitting electroluminescent device comprising R1R2R3N [R1-3 = (un)substituted aryl, hetercyclyl, aliphatic hydrocarbyl; ≥2 of R1-3 is aryl or heterocyclyl; ≥1 of R1-3 is aryl or heterocyclyl formed by ≥3 rings; ≥2 of R1-3 may form a ring; ≥1 R1-3 is substituted by a group (5 - 7 membered ring):C(R4)(CR5:CR6)m- (R4-6 = H, substituent; m = 0, 1 or 2)]. The red luminous component offers superior in color purity.
IT 382601-10-7P
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(electroluminescent devices using styrylamines)
RN 382601-10-7 HCAPLUS
CN 1H-Indene-1,3(2H)-dione, 2-[[4-(phenyl-1-pyrenylamino)phenyl]methylene]- (CA INDEX NAME)



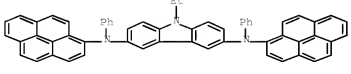
IC ICM C09K011-06
ICS C09K011-06; C07C225-22; C07D209-88; C07D333-36; C07D401-12; C07D409-12; C07D413-12; C07D417-12; C07D471-04; H05B033-14
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 74
IT 382601-08-3P 382601-09-4P 382601-10-7P 382601-11-8P 382601-12-9P 382601-13-0P
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(electroluminescent devices using styrylamines)

L64 ANSWER 22 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:619658 HCAPLUS Full-text
DOCUMENT NUMBER: 135:357646
TITLE: Light-Emitting Carbazole Derivatives: Potential Electroluminescent Materials
AUTHOR(S): Thomas, K. R. Justin; Lin, Jiann T.; Tao, Yu-Tai; Ko, Chung-Wen
CORPORATE SOURCE: Institute of Chemistry, Academia Sinica, Taipei, 115, Taiwan
SOURCE: Journal of the American Chemical Society (2001), 123(38), 9404-9411
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society

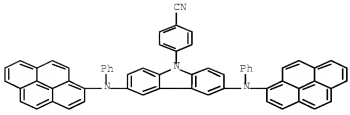
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 135:357646
ED Entered STN: 28 Aug 2001
AB Stable carbazole derivs. that contain peripheral diarylamines at the 3- and 6-positions and an Et or aryl substituent at the 9-position of the carbazole moiety have been synthesized via palladium-catalyzed C-N bond formation. These new carbazole compds. (carbs) are amorphous with high glass transition temps. (Tg, 120-194 °C) and high thermal decomposition temps. (Td > 450 °C). The compds. are weakly to moderately luminescent in nature. The emission wavelength ranges from green to blue and is dependent on the substituent at the peripheral nitrogen atoms. Two types of light-emitting diodes were constructed from carb: (I) ITO/carb/TPBI/Mg:Ag and (II) ITO/carb/Alq3/Mg:Ag, where TPBI and Alq3 are 1,3,5-tris(N-phenylbenzimidazol-2-yl)benzene and tris(8-hydroxyquinoline) aluminum, resp. In type I devices, the carb functions as the hole-transporting as well as emitting material. In type II devices, either carb, or Alq3 is the light-emitting material. Several green light-emitting devices exhibit exceptional maximum brightness, and the phys. performance appears to be better than those of typical green light-emitting devices of the structure ITO/diamine/Alq3/Mg:Ag. The relation between the LUMO of the carb and the performance of the light-emitting diode is discussed.
IT 340162-05-2P 373390-02-4P 373390-03-5P
373390-04-6P
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of light-emitting carbazole derivs. as potential electroluminescent materials)
RN 340162-05-2 HCAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6,9-triphenyl-N3,N6-di-1-pyrenyl- (CA INDEX NAME)



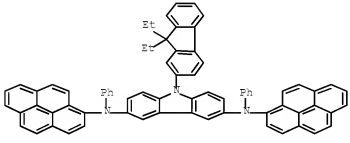
RN 373390-02-4 HCAPLUS
CN 9H-Carbazole-3,6-diamine, 9-ethyl-N3,N6-diphenyl-N3,N6-di-1-pyrenyl- (CA INDEX NAME)



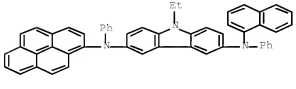
RN 373390-03-5 HCAPLUS
CN Benzonitrile, 4-[3,6-bis(phenyl-1-pyrenylamino)-9H-carbazol-9-yl]- (CA INDEX NAME)



RN 373390-04-6 HCAPLUS
CN 9H-Carbazole-3,6-diamine, 9-(9,9-diethyl-9H-fluoren-2-yl)-N3,N6-diphenyl-N3,N6-di-1-pyrenyl- (CA INDEX NAME)



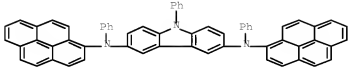
IT 373390-00-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of light-emitting carbazole derivs. as potential electroluminescent materials)
RN 373390-00-2 HCAPLUS
CN 9H-Carbazole-3,6-diamine, 9-ethyl-N3-1-naphthalenyl-N3,N6-diphenyl-N6-1-pyrenyl- (CA INDEX NAME)



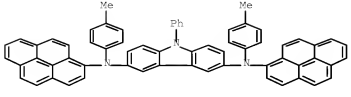
CC 22-9 (Physical Organic Chemistry)
Section cross-reference(s): 73, 74, 76
IT 144726-91-0P 340162-05-2P 373390-01-3P
373390-02-4P 373390-03-5P 373390-04-6P
373390-05-7P 373390-06-8P
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of light-emitting carbazole derivs. as potential electroluminescent materials)
IT 373390-00-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of light-emitting carbazole derivs. as potential electroluminescent materials)
REFERENCE COUNT: 59 THERE ARE 59 CITED REFERENCES AVAILABLE

FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

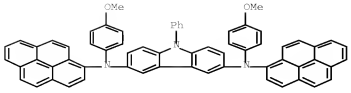
L64 ANSWER 23 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:102739 HCAPLUS Full-text
DOCUMENT NUMBER: 134:373783
TITLE: Novel green light-emitting carbazole derivatives: potential electroluminescent materials
AUTHOR(S): Thomas, K. R. Justin; Lin, Jiann T.; Tao, Yu-Tai; Ko, Chung-Wen
CORPORATE SOURCE: Institute of Chemistry, Academia Sinica, Taipei, 115, Taiwan
SOURCE: Advanced Materials (Weinheim, Germany) (2000), 12(24), 1949-1951
CODEN: ADVMEW; ISSN: 0935-9648
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 12 Feb 2001
AB The authors synthesized new carbazole-based, hole-transporting, green-light-emitting mols. with high glass transition temperature that are potentially useful for applications in electroluminescent devices. The authors describe an efficient synthesis of 3,6-bis(diarylamino)carbazole by Pd-catalyzed amination of 3,6-dibromocarbazole, and the use of the resulting triamines in LED fabrication.
IT 340162-05-2P 340162-07-4P 340162-08-5P
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(novel green light-emitting carbazole derivs. with potential electroluminescent materials in relation to hole transport)
RN 340162-05-2 HCAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6,9-triphenyl-N3,N6-di-1-pyrenyl- (CA INDEX NAME)



RN 340162-07-4 HCAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6-bis(4-methylphenyl)-9-phenyl-N3,N6-di-1-pyrenyl- (CA INDEX NAME)



RN 340162-08-5 HCAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6-bis(4-methoxyphenyl)-9-phenyl-N3,N6-di-1-pyrenyl- (CA INDEX NAME)



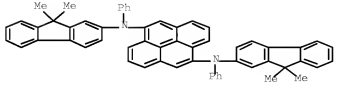
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 22, 67, 72, 74, 76
IT 340162-05-2P 340162-07-4P 340162-08-5P
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(novel green light-emitting carbazole derivs. with potential electroluminescent materials in relation to hole transport)
REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 24 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:764221 HCAPLUS Full-text
DOCUMENT NUMBER: 130:30988
TITLE: Organic compound and electroluminescent device using the same
INVENTOR(S): Senoo, Akihiko; Toshida, Yomishi; Hashimoto, Yuichi; Ueno, Kazunori; Mashimo, Seiji; Urakawa, Shinichi
PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Japan
SOURCE: Eur. Pat. Appl., 57 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

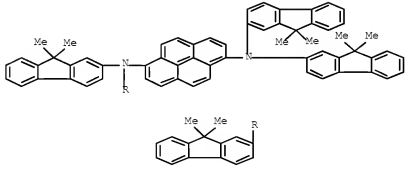
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 879868	A2	19981125	EP 1998-303790	1998 0514
			<--	
EP 879868	A3	19990107		
EP 879868	B1	20020403		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 11035532	A	19990209	JP 1998-145179	1998 0512
			<--	
JP 3508984	B2	20040322		
US 6517957	B1	20030211	US 1998-78570	1998 0514
			<--	
US 20030157364	A1	20030821	US 2002-266602	2002 1009
			<--	
US 6858325	B2	20050222		
PRIORITY APPLN. INFO.:			JP 1997-142958 A	1997 0519

<--
US 1998-78570 A3
1998
0514
<--

OTHER SOURCE(S): MARPAT 130:30988
ED Entered STN: 07 Dec 1998
AB Organic compds. are described which are represented by the general formula Ar1(Ar3)N-X-NAr2(Ar4) (X = (un)substituted arylene group or (un)substituted heterocyclic group; and each of at least 2 groups among Ar1, Ar2, Ar3, and Ar4 = (un)substituted fluorenyl, and the remainder = (un)substituted aryl). Electroluminescent devices formed of a pair of electrodes and an organic layer including ≥1 of the compds described above interposed between the electrodes are also described. Preparation of the compds entails reacting I-X-I with compds. described by the general formula HNArAr' (Ar, Ar' = desired (un)substituted fluorenyl and (un)substituted aryl groups).
IT 216454-21-6P 216454-57-8P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(organic diamino compds. and their preparation and electroluminescent devices using them)
RN 216454-21-6 HCAPLUS
CN 4,9-Pyrenediamine, N4,N9-bis(9,9-dimethyl-9H-fluoren-2-yl)-N4,N9-diphenyl- (CA INDEX NAME)



RN 216454-57-8 HCAPLUS
CN 1,6-Pyrenediamine, N1,N1,N6,N6-tetrakis(9,9-dimethyl-9H-fluoren-2-yl)- (CA INDEX NAME)



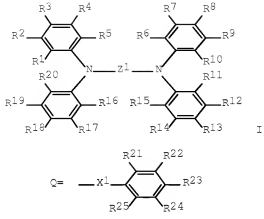
IC ICM C09K011-06
ICS H05B033-14
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 25
IT 216453-88-2P 216453-89-3P 216453-90-6P 216453-91-7P
216453-92-8P 216453-93-9P 216453-96-2P 216453-97-3P
216453-98-4P 216453-99-5P 216454-01-2P 216454-02-3P

216454-03-4P 216454-05-6P 216454-06-7P 216454-07-8P
216454-08-9P 216454-09-0P 216454-10-3P 216454-11-4P
216454-12-5P 216454-13-6P 216454-14-7P 216454-15-8P
216454-16-9P 216454-17-0P 216454-18-1P 216454-19-2P
216454-20-5P 216454-21-6P 216454-22-7P 216454-23-8P
216454-24-9P 216454-26-1P 216454-27-2P 216454-28-3P
216454-29-4P 216454-30-7P 216454-31-8P 216454-32-9P
216454-34-1P 216454-36-3P 216454-37-4P 216454-41-0P
216454-42-1P 216454-43-2P 216454-44-3P 216454-45-4P
216454-46-5P 216454-47-6P 216454-48-7P 216454-49-8P
216454-50-1P 216454-51-2P 216454-52-3P 216454-53-4P
216454-54-5P 216454-55-6P 216454-56-7P 216454-57-8P
216454-58-9P 216454-59-0P 216454-60-3P 216454-61-4P
216454-62-5P 216454-63-6P 216454-64-7P 216454-65-8P
216454-66-9P 216454-67-0P 216454-68-1P 216454-69-2P
216454-70-5P 216454-71-6P 216454-72-7P 216454-73-8P
216454-74-9P 216454-75-0P 216454-76-1P 216454-77-2P
216454-78-3P 216454-79-4P 216454-80-7P 216454-81-8P
216454-82-9P 216454-83-0P 216454-84-1P 216454-85-2P
216454-86-3P 216454-87-4P 216454-88-5P 216454-89-6P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(organic diamino compds. and their preparation and electroluminescent devices using them)

L64 ANSWER 25 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:651124 HCAPLUS Full-text
DOCUMENT NUMBER: 129:308409
ORIGINAL REFERENCE NO.: 129:62808a,62809a
TITLE: Positive-hole injection material for organic electroluminescent device
INVENTOR(S): Enokida, Toshio; Onikubo, Shunichi; Tamano, Michiko; Okutsu, Satoshi
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 43 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10265773	A	19981006	JP 1997-69911	1997 0324
			<--	
PRIORITY APPLN. INFO.:			JP 1997-69911	1997 0324
			<--	

OTHER SOURCE(S): MARPAT 129:308409
ED Entered STN: 14 Oct 1998
GI



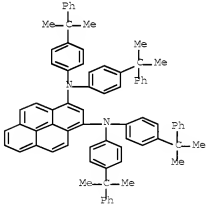
AB The material has a formula I [R1-20 = H, halo, alkyl, alkoxy, thioalkoxy, amino, monocyclic group, polycyclic group, Q; R21-25 = H, halo, alkyl, alkoxy, thioalkoxy, amino, monocyclic group, polycyclic group; R21-25 may form a cycloalkyl ring, aryl ring; X1 = direct bond, alkylene, (CR26R27)xO(CR28R29)y, (CR30R31)xS(CR32R33)y, O, S, CO, SO2, SiR34(R35), NR36, PR37, PO(R38); x, y = 0-8 integer; x + y ≠ 0; Z1 = Ar1, Ar2NR39Ar3, Ar4NR40Ar5NR41Ar6; Ar1-6 = arylene; R26-41 = alkyl, monocyclic group, polycyclic group]. The device shows high luminance, efficiency, long life, and storage stability.

IT 214338-08-6

RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(organic electroluminescent device containing aromatic pos.-hole injection material)

RN 214338-08-6 HCAPLUS

CN 1,3-Pyrenediamine, N1,N1,N3,N3-tetrakis[4-(1-methyl-1-phenylethyl)phenyl]- (CA INDEX NAME)



IC ICM C09K011-06

CC 75-12 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

IT 177799-15-4 205697-02-5 213968-34-4 213968-38-8
213968-61-7 213968-69-5 214337-93-6 214337-94-7
214337-95-8 214337-96-9 214337-97-0 214337-98-1
214338-00-8 214338-02-0 214338-03-1 214338-04-2

214338-05-3 214338-06-4 214338-07-5 214338-08-6
214338-09-7 214338-10-0 214338-11-1 214338-12-2
214338-13-3 214338-14-4 214338-15-5 214338-16-6
214338-17-7 214338-18-8 214338-19-9 214338-20-2
214338-21-3 214338-22-4 214338-23-5 214338-24-6
214338-25-7 214338-26-8 214338-27-9 214338-28-0
214338-29-1 214338-30-4 214338-31-5 214338-32-6
214338-33-7 214338-34-8 214338-35-9 214338-36-0
214338-37-1 214338-38-2 214338-39-3 214338-40-6
214338-41-7 214338-42-8 214338-43-9 214338-44-0
214338-45-1 214338-46-2 214338-47-3 214338-48-4
214338-49-5 214338-50-8 214338-51-9 214338-52-0
214338-53-1 214338-54-2 214338-55-3 214338-56-4
214338-57-5 214338-58-6 214338-59-7 214338-60-0
214338-61-1 214338-62-2 214338-63-3 214338-64-4
214338-65-5 214338-66-6 214338-67-7 214338-68-8
214338-69-9 214338-70-2 214338-71-3 214338-72-4
214338-73-5 214338-74-6 214338-75-7 214338-76-8
214338-77-9
RL: DEV (Device component use); MOA (Modifier or additive use);
USES (Uses)
(organic electroluminescent device containing aromatic pos.-hole injection material)

L64 ANSWER 26 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:614437 HCAPLUS Full-text
DOCUMENT NUMBER: 129:295965
ORIGINAL REFERENCE NO.: 129:60239a,60242a
TITLE: Organic electroluminescent device with high luminance and polycyclic phosphorescent compound therefor
INVENTOR(S): Onikubo, Shunichi; Tamano, Michiko; Okutsu, Satoshi; Enokida, Toshio
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 59 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10251633	A	19980922	JP 1997-62568	1997 0317
			<--	
JP 3503403	B2	20040308		
EP 866110	A1	19980923	EP 1998-301986	1998 0317
			<--	
EP 866110	B1	20041020		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
EP 934992	A1	19990811	EP 1999-106698	1998 0317
			<--	
EP 934992	B1	20040721		
R: DE, FR, GB				
US 6280859	B1	20010828	US 1998-42569	1998 0317
			<--	
US 20010033944	A1	20011025		

PRIORITY APPLN. INFO.: JP 1997-62568 A 1997 0317
<--
EP 1998-301986 A3 1998 0317
<--

OTHER SOURCE(S): MARPAT 129:295965
ED Entered STN: 29 Sep 1998
GI

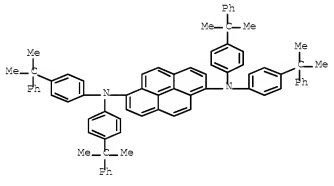
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT
*

AB The claimed compound is I [A = aromatic (condensed) ring, (condensed) heterocycle excluding Q1 (E = H or linkage), bivalent group comprising ≥2 kinds of 2-10 above ring systems which are connected directly or via O, N, S, C1-20 chain, nonarom. cycle, where the case of A = Q3 is excluded; Ar1-4 = (condensed) aromatic group; X1-4 = O, S, CO, SO2, CxH2xOCyH2y (x, y = 0-20; x + y ≠ 0), C2-20 alkyl(id)ene, bivalent alicyclic group; R1-20 = H, halo, alkyl (oxy), aromatic ring, aromatic heterocycle, amino]. Also claimed is an organic electroluminescent device containing I with high luminance and good stability in repeated uses.

IT 213968-46-8
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(luminescent material; organic electroluminescent device containing polycyclic phosphorescent compound with high luminance)

RN 213968-46-8 HCAPLUS

CN 1,6-Pyrenediamine, N1,N1,N6,N6-tetrakis[4-(1-methyl-1-phenylethyl)phenyl]- (CA INDEX NAME)



IC ICM C09K011-06

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 25

IT 205697-02-5 213968-34-4 213968-36-6 213968-38-8
213968-40-2 213968-41-3 213968-42-4 213968-43-5
213968-44-6 213968-45-7 213968-46-8 213968-47-9
213968-48-0 213968-49-1 213968-50-4 213968-51-5
213968-52-6 213968-53-7 213968-54-8 213968-55-9
213968-56-0 213968-57-1 213968-58-2 213968-59-3
213968-60-6 213968-61-7 213968-62-8 213968-63-9
213968-64-0 213968-65-1 213968-66-2 213968-67-3
213968-68-4 213968-69-5 213968-70-8 213968-71-9

213968-73-1 213968-74-2 213968-75-3 213968-76-4
213968-77-5 213968-79-7 213968-80-0 213968-81-1
213968-82-2 213968-83-3 213968-85-5 213968-86-6
213968-87-7 213968-88-8 213968-89-9 213968-91-3
213968-92-4 213968-93-5 213968-94-6 213968-95-7
213968-96-8 213968-97-9 213968-98-0 213968-99-1
213969-00-7 213969-01-8 213969-02-9 213969-03-0
213969-04-1 213969-05-2 213969-06-3 213969-07-4
213969-08-5 213969-09-6 213969-10-9 213969-11-0
213969-12-1 213969-13-2 213969-14-3 213969-15-4
213969-16-5 213969-17-6 213969-18-7 213969-19-8
213969-20-1 213969-21-2 213969-22-3 213969-23-4
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(luminescent material; organic electroluminescent device containing polycyclic phosphorescent compound with high luminance)

L64 ANSWER 27 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:211295 HCAPLUS Full-text
DOCUMENT NUMBER: 128:263742
ORIGINAL REFERENCE NO.: 128:52077a,52080a
TITLE: organic electroluminescent devices with high durability and using N-phenylaminopyrene derivatives
INVENTOR(S): Tamura, Shinichiro; Ichimura, Mari
PATENT ASSIGNEE(S): Sony Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

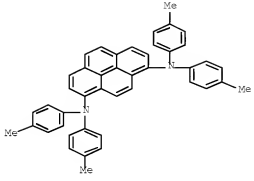
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10088122	A	19980407	JP 1996-240885	1996 0912
			<--	
PRIORITY APPLN. INFO.:			JP 1996-240885	1996 0912
			<--	

OTHER SOURCE(S): MARPAT 128:263742
ED Entered STN: 15 Apr 1998
GI

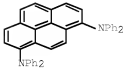
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT
*

AB The devices, showing high luminance efficiency, contain N-phenylaminopyrene derivs. preferably represented by ≥1 of I-III [R1-3 = H, alkyl (oxy), halo, and/or (un)substituted Ph] as hole-transporting materials in emitting layers.
IT 142827-48-3P 205037-20-3P 205037-22-5P
205037-22-6P 205037-24-7P 205037-25-8P
RL: DEV (Device component use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(in preparation of N-phenylaminopyrene derivs. for electroluminescent devices with excellent durability)
RN 142827-48-3 HCAPLUS
CN 1,8-Pyrenediamine, N,N,N',N'-tetrakis(4-methylphenyl)- (9CI) (CA

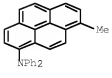
INDEX NAME)



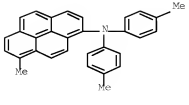
RN 205037-20-3 HCAPLUS
CN 1,8-Pyrenediamine, N1,N1,N8,N8-tetraphenyl- (CA INDEX NAME)



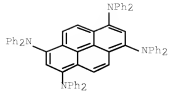
RN 205037-22-5 HCAPLUS
CN 1-Pyrenamine, 8-methyl-N,N-diphenyl- (CA INDEX NAME)



RN 205037-23-6 HCAPLUS
CN 1-Pyrenamine, 8-methyl-N,N-bis(4-methylphenyl)- (CA INDEX NAME)

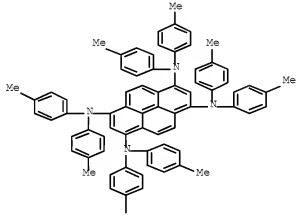


RN 205037-24-7 HCAPLUS
CN 1,3,6,8-Pyrenetetramine, N1,N1,N3,N3,N6,N6,N8,N8-octaphenyl- (CA INDEX NAME)



RN 205037-25-8 HCAPLUS
CN 1,3,6,8-Pyrenetetramine, N1,N1,N3,N3,N6,N6,N8,N8-octakis(4-methylphenyl)- (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

Me

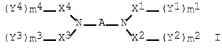
IC ICM C09K011-06
ICS H05B033-14; H05B033-22
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 25
IT 142827-48-3P 205037-20-3P 205037-22-5P 205037-23-6P 205037-24-7P 205037-25-8P
RL: DEV (Device component use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(in preparation of N-phenylaminopyrene derivs. for electroluminescent devices with excellent durability)

L64 ANSWER 28 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:678708 HCAPLUS Full-text
DOCUMENT NUMBER: 128:17237
ORIGINAL REFERENCE NO.: 128:3255a,3258a

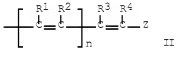
TITLE: Organic electroluminescent device elements
INVENTOR(S): Enokida, Toshio; Tamano, Michiko
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 33 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09268284	A	19971014	JP 1996-78501	1996 0401
			<--	
JP 3564859	B2	20040915		
PRIORITY APPLN. INFO.:			JP 1996-78501	1996 0401
			<--	

OTHER SOURCE(S): MARPAT 128:17237
ED Entered STN: 25 Oct 1997
GI

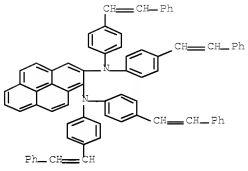


I



II

AB The elements comprise the phosphors I containing II; I [A, X1-4 = C2-20 arylene; m1, m2, m3, m4 = 0-2; Y1-4 = II] II [R1-4 = H, (un)substituted alkyl, (un)substituted aryl, CN; Z = (un)substituted aryl; n = 0, 1]; a tertiary amine derivative (B1,2N)G(NB3,4) formed between the phosphor and the anode [B1-4 = (un)substituted C6-20 aryl; G = (un)substituted arylene]; and a metal complex Q1,2GaL formed between the phosphor and the cathode [Q1,2 = (un)substituted hydrobenzoquinoline derivative; L = halo, (un)substituted (cyclo)alkyl, aryl cong. optional (un)substituted N, OR (R ≡ L)].
IT 198903-47-8
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent device elements)
RN 198903-47-8 HCAPLUS
CN 1,2-Pyrenediamine, N1,N1,N2,N2-tetrakis[4-(2-phenylethenyl)phenyl]-
(CA INDEX NAME)



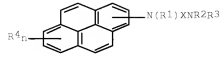
IC ICM C09K011-06
ICS H05B033-14
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
IT 517-51-1 905-62-4 980-26-7 1047-16-1 1499-10-1 2085-33-8
7520-01-6 13978-85-3 14642-34-3 15082-28-7 38215-36-0
51325-91-8 58361-82-3 58473-78-2 61843-06-9 65181-78-4
73276-70-7 99762-78-4 123847-85-8 139255-17-7 143010-15-5
146162-54-1 146162-63-2 150405-69-9 151026-65-2
164259-44-3 166444-98-0 185505-35-5 186965-89-9
188049-36-7 188049-37-8 188049-39-0 188049-41-4
189263-95-4 198903-35-4 198903-36-5 198903-37-6
198903-38-7 198903-39-8 198903-40-1 198903-41-2
198903-42-3 198903-43-4 198903-44-5 198903-45-6
198903-46-7 198903-47-8 198903-48-9 198903-49-0
198903-50-3 198903-51-4 198903-52-5 198903-53-6
198903-54-7 198903-55-8 198903-56-9 198903-57-0
198903-58-1 198903-59-2 198903-60-5 198903-61-6
198903-62-7 198903-63-8 198903-64-9
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent device elements)

L64 ANSWER 29 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:72156 HCAPLUS Full-text
DOCUMENT NUMBER: 126:96671
ORIGINAL REFERENCE NO.: 126:18533a,18536a
TITLE: Organic electroluminescent device
INVENTOR(S): Nagai, Kazukyo; Adachi, Chihaya; Tamoto, Nozomi; Anzai, Mitsutoshi; Murakami, Yasuo
PATENT ASSIGNEE(S): Ricoh KK, Japan; Hodogaya Chemical Co., Ltd.
SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08302341	A	19961119	JP 1995-127149	19950427
			<--	
JP 3537915	B2	20040614		
PRIORITY APPLN. INFO.:			JP 1995-127149	19950427
			<--	

OTHER SOURCE(S): MARPAT 126:96671

ED Entered STN: 01 Feb 1997
GI

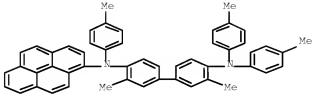


I

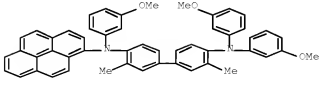
AB An organic electroluminescent device comprise a organic multilayer structure sandwiched between a cathode and an anode, wherein the multilayer contains a light emitting layer including a compound represented by I [R1-3 = independently alkyl or aryl (un)substituted groups; R4 = H, alkyl, and alkoxy; n = integer 1-3; X = (un)substituted arylene or divalent heterocyclic groups].

IT 168638-10-6 171889-69-3
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(organic electroluminescent device)

RN 168638-10-6 HCAPLUS
CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-N,N,N'-tris(4-methylphenyl)-N'-1-pyrenyl- (9CI) (CA INDEX NAME)



RN 171889-69-3 HCAPLUS
CN [1,1'-Biphenyl]-4,4'-diamine, N,N,N'-tris(3-methoxyphenyl)-3,3'-dimethyl-N'-1-pyrenyl- (9CI) (CA INDEX NAME)



IC ICM C09K011-06
ICS H05B033-14
CC 72-1 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

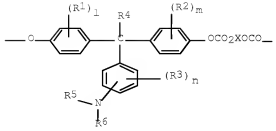
IT 134917-82-1 148044-09-1 157019-71-1 168638-08-2
168638-09-3 168638-10-6 171889-69-3
185556-22-3
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(organic electroluminescent device)

L64 ANSWER 30 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:14744 HCAPLUS Full-text
DOCUMENT NUMBER: 126:75353
ORIGINAL REFERENCE NO.: 126:14591a,14594a
TITLE: Aromatic polycarbonates and preparation method
INVENTOR(S): Suzuki, Tetsuo; Sasaki, Masaomi; Tamura, Hiroshi; Shimada, Tomoyuki; Oota, Masabumi; Anzai, Mitsutoshi; Imai, Akihiro
PATENT ASSIGNEE(S): Ricoh Kk, Japan; Hodogaya Chemical Co Ltd
SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
JP 08269183	A	19961015	JP 1995-269175		19950922
				<--	
US 5747204	A	19980505	US 1996-665702		19960618
				<--	
US 5830980	A	19981103	US 1997-956284		19971023
				<--	
PRIORITY APPLN. INFO.:			JP 1994-315722	A	19941125
				<--	
			JP 1994-315721	A	19941125
				<--	
			JP 1995-269175	A	19950922
				<--	
			JP 1995-269176	A	19950922
				<--	
			US 1995-562154	B2	19951122
				<--	
			JP 1995-333992	A	19951129
				<--	
			US 1996-665702	A3	19960618
				<--	

ED Entered STN: 11 Jan 1997
GI



I

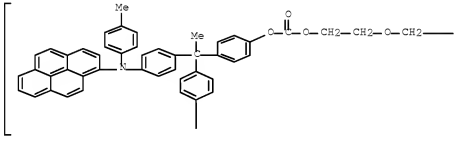
AB The title polymers, bearing the repeating units of I [R1-R3 = (un)substituted alkyl, halo; R4 = H, (un)substituted alkyl; R5, R6 = (un)substituted aromatic hydrocarbyl; X = aliphatic (cyclo)hydrocarbylene; l, m, n = 0-4], are prepared by polymerization of tertiary amino group-containing biphenols with ClCO2XO2CCl. The polymers are useful for electrophotog. and electroluminescent materials (no data). Thus, polymerization of 1,1-bis(4-hydroxyphenyl)-1- (4-di-p-tolylaminophenyl)ethane with diethylene glycol bis(chloroformate) gave a polymer having Tg 119°, and Mw 46,000.

IT 184363-47-1P 184363-53-9P 184874-72-4P
184874-80-4P 184874-81-5P 184874-82-6P
184874-83-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(aromatic polycarbonates and their preparation method for electrophotog. and electroluminescent materials)

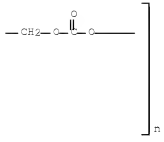
RN 184363-47-1 HCAPLUS

CN Poly[oxycarbonyloxy-1,2-ethanediyloxy-1,2-ethanediyloxycarbonyloxy-1,4-phenylene[1-[4-[(4-methylphenyl)-1-pyrenylamino]phenyl]ethylidene]-1,4-phenylene] (9CI) (CA INDEX NAME)

PAGE 1-A

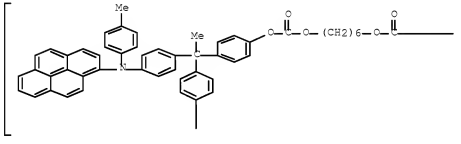


PAGE 1-B

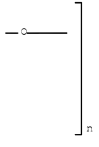


RN 184363-53-9 HCAPLUS
CN Poly[oxycarbonyloxy-1,6-hexanediyloxycarbonyloxy-1,4-phenylene[1-[4-[(4-methylphenyl)-1-pyrenylamino]phenyl]ethylidene]-1,4-phenylene] (9CI) (CA INDEX NAME)

PAGE 1-A



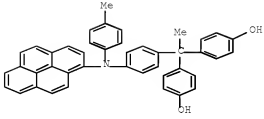
PAGE 1-B



RN 184874-72-4 HCAPLUS
CN Carbonochloridic acid, oxydi-2,1-ethanediyl ester, polymer with 4,4'-[1-[4-[(4-methylphenyl)-1-pyrenylamino]phenyl]ethylidene]bis[phenol] (9CI) (CA INDEX NAME)

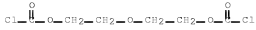
CM 1

CRN 174829-95-9
CMF C43 H33 N O2



CM 2

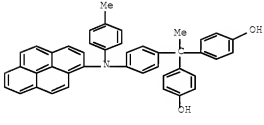
CRN 106-75-2
CMF C6 H8 Cl2 O5



RN 184874-80-4 HCAPLUS
CN Carbonochloridic acid, 1,6-hexanediyl ester, polymer with 4,4'-[1-[4-[(4-methylphenyl)-1-pyrenylamino]phenyl]ethylidene]bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 174829-95-9
CMF C43 H33 N O2



CM 2

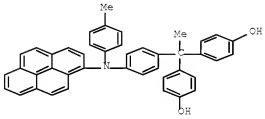
CRN 2916-20-3
CMF C8 H12 Cl2 O4

RN 184874-81-5 HCAPLUS

CN Carbonochloridic acid, (1-methylethylidene)di-4,1-phenylene ester, polymer with 4,4'-[1-[4-[(4-methylphenyl)-1-pyrenylamino]phenyl]ethylidene]bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 174829-95-9
CMF C43 H33 N O2



CM 2

CRN 2024-88-6
CMF C17 H14 Cl2 O4

RN 184874-82-6 HCAPLUS
CN Poly[oxycarbonyloxy-1,4-phenylene(1-methylethylidene)-1,4-phenyleneoxycarbonyloxy-1,4-phenylene[1-[4-[(4-methylphenyl)-1-pyrenylamino]phenyl]ethylidene]-1,4-phenylene] (9CI) (CA INDEX NAME)

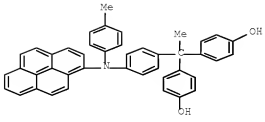
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT
*

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT
*

RN 184874-83-7 HCAPLUS
CN Phenol, 4,4'-[1-[4-[(4-methylphenyl)-1-pyrenylamino]phenyl]ethylidene]bis-, polymer with α-(chlorocarbonyl)-ω-[(chlorocarbonyl)oxy]poly(oxy-1,4-butanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 174829-95-9
CMF C43 H33 N O2



CM 2

CRN 31345-17-2
CMF (C4 H8 O)n C2 Cl2 O3
CCI PMS

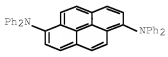
IC ICM C08G064-04
ICS C08G064-24; G03G005-05; H05B033-22
CC 35-5 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 73, 74
IT 184363-20-0P 184363-43-7P 184363-45-9P 184363-47-1P
184363-49-3P 184363-51-7P 184363-53-9P 184363-57-3P
184874-70-2P 184874-71-3P 184874-72-4P 184874-73-5P
184874-74-6P 184874-75-7P 184874-76-8P 184874-77-9P
184874-78-0P 184874-79-1P 184874-80-4P
184874-81-5P 184874-82-6P 184874-83-7P
207454-73-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(aromatic polycarbonates and their preparation method for electrophotog. and electroluminescent materials)

L64 ANSWER 31 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:641144 HCAPLUS Full-text
DOCUMENT NUMBER: 125:288355
ORIGINAL REFERENCE NO.: 125:53695a,53698a
TITLE: Organic electroluminescent device
INVENTOR(S): Hosokawa, Chishio; Kawamura, Hisayuki
PATENT ASSIGNEE(S): Idemitsu Kosan Co, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 25 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08199162	A	19960806	JP 1995-10918	19950126
			<--	
JP 3506281	B2	20040315		
JP 2004006379	A	20040108	JP 2003-176314	

2003
0620
<--
JP 2006128715 A 20060518 JP 2006-9511
2006
0118
<--
PRIORITY APPLN. INFO.: JP 1995-10918 A3
1995
0126
<--
JP 2003-176314 A3
2003
0620
<--

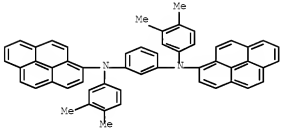
OTHER SOURCE(S): MARPAT 125:288355
ED Entered STN: 31 Oct 1996
AB An organic electroluminescent device, having prolonged stability, suited for use as displays, wherein the recombination region and/or electroluminescent region, sandwiched between a pair of electrodes, contains 0.1-8 % of fluorescent dopant(s) selected from the compound represented by Ar1N(Ar2)Ar3 [Ar1-3 = C1-10 alkyl, C6-30 aryl, and heterocyclic; one of Ar1-3 is C≥12 condensed polycyclic hydrocarbon] and Ar4(Ar6)NAr8N(Ar7)Ar5 [Ar4-7 = C1-10 alkyl, C6-30 aryl, and heterocyclic; Ar8 = C6-30 arylene, or divalent heterocyclic; one of Ar4-8 is C≥12 condensed polycyclic hydrocarbon].
IT 76656-53-6
RL: DEV (Device component use); MOA (Modifier or additive use);
USES (Uses)
(organic electroluminescent device)
RN 76656-53-6 HCAPLUS
CN 1,6-Pyrenediamine, N1,N1,N6,N6-tetraphenyl- (CA INDEX NAME)



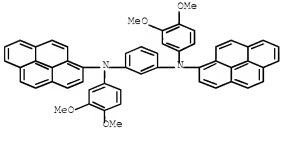
IC ICM C09K011-06
ICS H05B033-14
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
IT 70782-27-3 76656-53-6 123847-85-8 124729-98-2 139255-20-2 139255-24-6 142289-08-5 182426-74-0 182426-75-1
RL: DEV (Device component use); MOA (Modifier or additive use);
USES (Uses)
(organic electroluminescent device)

L64 ANSWER 32 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:606283 HCAPLUS Full-text
DOCUMENT NUMBER: 125:342202
ORIGINAL REFERENCE NO.: 125:63709a,63712a
TITLE: Durability characteristics of aminopyrene dimer molecules as an emitter in organic multilayered electroluminescent diodes
AUTHOR(S): Adachi, Chihaya; Nagai, Kazukiyo; Tamoto, Nazomu
CORPORATE SOURCE: Chemical Products R&D Center, Ricoh Co. Ltd., Shizuoka, 410, Japan
SOURCE: Japanese Journal of Applied Physics, Part 1: Regular Papers, Short Notes & Review Papers (1996), 35(9A), 4819-4825

CODEN: JAPNDE; ISSN: 0021-4922
PUBLISHER: Japanese Journal of Applied Physics
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 11 Oct 1996
AB The authors report the structure design of emitter mols. using aminopyene dimers for obtaining durable organic electroluminescent (EL) diodes. Using 18 kinds of emitter mols. having a variety of substituents and linking groups, the authors studied the durability of the cell structure of the anode/hole transport layer/emitter layer/electron transport layer 2/electron transport layer 1/cathode. The chemical structures of the emitter mols. strongly influenced the durability of the EL devices under continuous d.c. operation. The authors observed no direct relations between m.p. (Tm), glass transition temperature (Tg), ionization potential (Ip), electron affinity (Ea) of emitter layers and EL device durabilities. The effect of the substituent groups of emitter mols. on EL device durability suggests that the chemical stability of the emitter mols. largely influences EL device durability.
IT 157357-78-3 157357-83-0
RL: DEV (Device component use); PRP (Properties); USES (Uses)
(durability characteristics of aminopyrene dimer mols. as emitter in organic multilayered electroluminescent diodes)
RN 157357-78-3 HCAPLUS
CN 1,3-Benzenediamine, N,N'-bis(3,4-dimethylphenyl)-N,N'-di-1-pyrenyl- (9CI) (CA INDEX NAME)



RN 157357-83-0 HCAPLUS
CN 1,3-Benzenediamine, N,N'-bis(3,4-dimethoxyphenyl)-N,N'-di-1-pyrenyl- (9CI) (CA INDEX NAME)



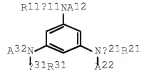
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
IT 157357-76-1 157357-77-2 157357-78-3 157357-79-4
157357-80-7 157357-81-8 157357-82-9 157357-83-0
157357-85-2 157357-86-3 157357-87-4 183889-30-7D, derivs.
183889-31-8D, derivs. 183889-32-9 183889-33-0D, derivs.
183889-34-1D, derivs. 183889-35-2D, derivs. 183889-36-3D, derivs.
RL: DEV (Device component use); PRP (Properties); USES (Uses)

(durability characteristics of aminopyrene dimer mols. as emitter in organic multilayered electroluminescent diodes)

L64 ANSWER 33 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:273378 HCAPLUS Full-text
DOCUMENT NUMBER: 124:302069
ORIGINAL REFERENCE NO.: 124:55735a,55738a
TITLE: Organic electroluminescent device
INVENTOR(S): Shirota, Yasuhiko; Nakatani, Kenji; Inoe, Tetsuji; Nanba, Noryoshi
PATENT ASSIGNEE(S): TDK Electronics Co., Ltd., Japan; TDK Corp.
SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08048974	A	19960220	JP 1994-207970	19940809
			<--	
JP 3471910	B2	20031202		
PRIORITY APPLN. INFO.:			JP 1994-207970	19940809
			<--	

OTHER SOURCE(S): MARPAT 124:302069
ED Entered STN: 10 May 1996
GI

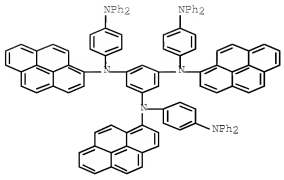


I

AB The organic electroluminescent device comprises a layer containing electron injection/transport compound and trisarylaminobenzene represented by I [Φ11, Φ21, and Φ31 = divalent aromatic residue; R11, R21, and R31 = NΦ01Φ02, NHΦ01, NR01Φ01, Φ01, oΦ01 or SΦ01; Φ01, Φ02 = monovalent aromatic residue; R01 = alkyl; one of R01, R02, and R03 = NΦ01Φ02, NHΦ01, or NR01Φ01; A12, A22, and A32 = monovalent aromatic residue, alkyl, or H].

IT 162879-30-3
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent device having layer containing trisarylaminobenzene derivative)

RN 162879-30-3 HCAPLUS
CN 1,3,5-Benzenetriamine, N,N',N''-tris[4-(diphenylamino)phenyl]-N,N',N''-tri-1-pyrenyl- (9CI) (CA INDEX NAME)

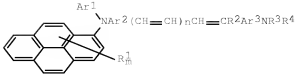


IC ICM C09K011-06
ICS H05B033-14
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 76
IT 153521-90-5 153521-91-6 162879-22-3 162879-23-4
162879-24-5 162879-25-6 162879-26-7 162879-27-8
162879-28-9 162879-29-0 162879-30-3 162879-31-4
162879-32-5 176178-81-7
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent device having layer containing trisarylaminobenzene derivative)

L64 ANSWER 34 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:958741 HCAPLUS Full-text
DOCUMENT NUMBER: 124:40979
ORIGINAL REFERENCE NO.: 124:7553a,7556a
TITLE: Field-effect electroluminescent device
INVENTOR(S): Tamoto, Nozomi; Tanaka, Chiaki; Nagai, Kazukyo; Adachi, Chihaya; Sakon, Hirota
PATENT ASSIGNEE(S): Ricoh Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07249490	A	19950926	JP 1994-64508	1994 0308
			<--	
PRIORITY APPLN. INFO.:			JP 1994-64508	1994 0308
			<--	

OTHER SOURCE(S): MARPAT 124:40979
ED Entered STN: 02 Dec 1995
GI



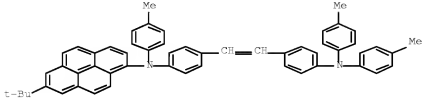
I

AB The title device has ≥1 layer containing a pyrenyl-containing olefin compound I [R1 = H, lower alkyl, alkoxy; R2 = H, cyano, alkoxycarbonyl, (substituted) alkyl, (substituted) phenyl; R3-4, Ar1 = (substituted) alkyl, (substituted) carbocyclic aromatic group; Ar2-3 = (substituted) carbocyclic aromatic group; m = 1-3; n = 0, 1]. The layer containing I may be a hole-transporting layer or a light-emitting layer. The device showed low working voltage and high luminance.

IT 171812-48-9 171812-49-0
RL: DEV (Device component use); USES (Uses)
(field-effect electroluminescent devices employing pyrenyl-containing olefin compds.)

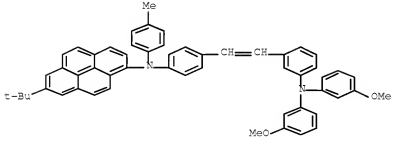
RN 171812-48-9 HCAPLUS

CN 1-Pyrenamine, N-[4-[2-[4-[bis(4-methylphenyl)amino]phenyl]ethenyl]phenyl]-7-(1,1-dimethylethyl)-N-(4-methylphenyl)- (CA INDEX NAME)



RN 171812-49-0 HCAPLUS

CN 1-Pyrenamine, N-[4-[2-[3-[bis(3-methoxyphenyl)amino]phenyl]ethenyl]phenyl]-7-(1,1-dimethylethyl)-N-(4-methylphenyl)- (CA INDEX NAME)



IC ICM H05B033-14
ICS C07C229-44; C09K011-06

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 25

IT 168638-17-3 168638-19-5 168638-22-0 171812-48-9 171812-49-0
RL: DEV (Device component use); USES (Uses)

(field-effect electroluminescent devices employing pyrenyl-containing olefin compds.)

L64 ANSWER 35 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:867611 HCAPLUS Full-text
DOCUMENT NUMBER: 123:285572
ORIGINAL REFERENCE NO.: 123:51170h,51171a
TITLE: Preparation of pyrene derivatives as electroluminescent materials
INVENTOR(S): Tamoto, Nozomi; Nagai, Kazukyo; Adachi, Chihaya; Sakon, Hirota
PATENT ASSIGNEE(S): Ricoh Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

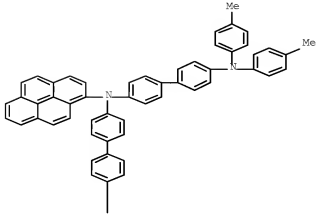
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07101911	A	19950418	JP 1993-271360	1993 1004
			<--	
JP 3549555	B2	20040804		
PRIORITY APPLN. INFO.:			JP 1993-271360	1993 1004
			<--	

OTHER SOURCE(S): MARPAT 123:285572
ED Entered STN: 20 Oct 1995
GI

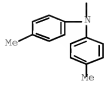
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT
*

AB The title compds. I [R1 - R3 = halo, cyano, etc.; l = 0 - 9; m = 0 -4; n = 0 - 5] are prepared An electroluminescent element containing the title compound II (preparation given) gave emission with high luminance for 1 mo.
IT 169195-00-0P 169195-01-1P 169195-02-2P
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of pyrene derivs. as electroluminescent materials)
RN 169195-00-0 HCAPLUS
CN [1,1'-Biphenyl]-4,4'-diamine, N-[4'-[bis(4-methylphenyl)amino][1,1'-biphenyl]-4-yl]-N',N'-bis(4-methylphenyl)-N-1-pyrenyl- (9CI) (CA INDEX NAME)

PAGE 1-A

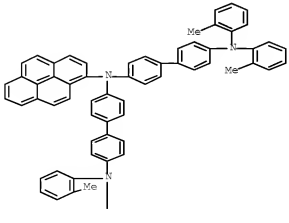


PAGE 2-A



RN 169195-01-1 HCAPLUS
CN [1,1'-Biphenyl]-4,4'-diamine, N-[4'-[bis(2-methylphenyl)amino][1,1'-biphenyl]-4-yl]-N',N'-bis(2-methylphenyl)-N-1-pyrenyl- (9CI) (CA INDEX NAME)

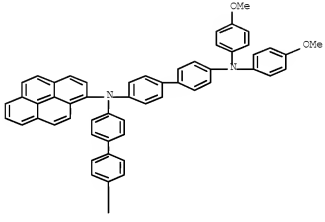
PAGE 1-A



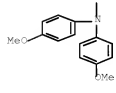
PAGE 2-A

RN 169195-02-2 HCAPLUS
CN [1,1'-Biphenyl]-4,4'-diamine, N-[4'-[bis(4-methoxyphenyl)amino][1,1'-biphenyl]-4-yl]-N',N'-bis(4-methoxyphenyl)-N-1-pyrenyl- (9CI) (CA INDEX NAME)

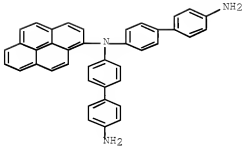
PAGE 1-A



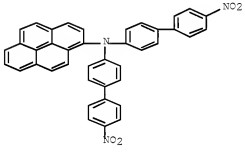
PAGE 2-A



IT 169195-03-3P 169195-04-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of pyrene derivs. as electroluminescent materials)
RN 169195-03-3 HCAPLUS
CN [1,1'-Biphenyl]-4,4'-diamine, N-(4'-amino[1,1'-biphenyl]-4-yl)-N-1-pyrenyl- (9CI) (CA INDEX NAME)



RN 169195-04-4 HCAPLUS
CN 1-Pyrenamine, N,N-bis(4'-nitro[1,1'-biphenyl]-4-yl)- (CA INDEX NAME)

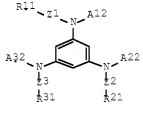


IC ICM C07C211-61
ICS C07C209-10; C07C209-36; C07C217-92; C07C255-58; C09K011-06
ICA C07B061-00
CC 25-28 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 73, 74
IT 169195-00-0P 169195-01-1P 169195-02-2P
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of pyrene derivs. as electroluminescent materials)
IT 169195-03-3P 169195-04-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of pyrene derivs. as electroluminescent materials)

L64 ANSWER 36 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:489867 HCAPLUS Full-text
DOCUMENT NUMBER: 122:277531
ORIGINAL REFERENCE NO.: 122:50397a,50400a
TITLE: Trisarylaminobenzene derivatives, compounds for organic electroluminescent element, and organic electroluminescent element.
INVENTOR(S): Shirota, Yasuhiko; Nakaya, Kenji; Okada, Norihiro; Namba, Kenryo
PATENT ASSIGNEE(S): Japan
SOURCE: Eur. Pat. Appl., 22 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 611148	A1	19940817	EP 1994-300954	1994 0209
			<--	
EP 611148	B1	19980603		
R: DE, FR, GB				
JP 07097355	A	19950411	JP 1994-36605	1994 0209
			<--	
JP 3419534	B2	20030623		
US 5508136	A	19960416	US 1994-194145	1994 0210
			<--	
PRIORITY APPLN. INFO.:			JP 1993-45785 A	1993 0210
			<--	
			JP 1993-140041 A	1993 0519
			<--	

OTHER SOURCE(S): MARPAT 122:277531
ED Entered STN: 15 Apr 1995
GI



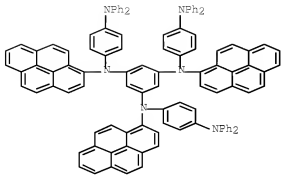
I

AB Novel trisarylaminobenzene derivs. are represented by the formula I [Z1, Z2, and Z3 = divalent aromatic ring residues, R11, R21, and R31 = groups represented by -NZ1Z2, -NHZ1, -NR1Z1, -Z1, -OZ1 or -SZ1 wherein each of Z1 and Z2 = a monovalent aromatic ring residue, and R1 is an alkyl group, ≥1 of R11, R21, and R31 being a group represented by -NZ1Z2, -NHZ1 or -NR1Z1, and A12, A22, and A32 = aromatic residues, alkyl groups or H]. An organic electroluminescent element which uses the compound in an organic compound layer, especially in a hole injection transport layer provides uniform plane light emission and is durable enough to maintain luminance.

IT 162879-30-3
RL: MOA (Modifier or additive use); USES (Uses)
(electroluminescent element component)

RN 162879-30-3 HCAPLUS

CN 1,3,5-Benzenetriamine, N,N',N''-tris[4-(diphenylamino)phenyl]-N,N',N''-tri-1-pyrenyl- (9CI) (CA INDEX NAME)

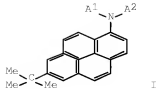


IC ICM C07C211-54
ICS H05B033-14; H01B001-12
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 25
IT 153521-91-6 162879-22-3 162879-23-4 162879-24-5
162879-25-6 162879-26-7 162879-27-8 162879-28-9
162879-29-0 162879-30-3 162879-31-4 162879-32-5
162879-33-6 162879-34-7 162879-35-8 162879-36-9
162879-37-0 162879-38-1
RL: MOA (Modifier or additive use); USES (Uses)
(electroluminescent element component)

L64 ANSWER 37 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1994:90368 HCAPLUS Full-text
DOCUMENT NUMBER: 120:90368
ORIGINAL REFERENCE NO.: 120:15917a,15920a
TITLE: Organic electroluminescent device
INVENTOR(S): Onuma, Teruyuki; Shimada, Tomoyuki; Ota, Masabumi; Sakon, Hirota; Takahashi, Toshihiko; Yamaguchi, Takehito
PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05021161	A	19930129	JP 1991-190953	1991 0705
			<--	
PRIORITY APPLN. INFO.:			JP 1991-190953	1991 0705
			<--	

ED Entered STN: 19 Feb 1994
GI

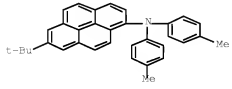


I

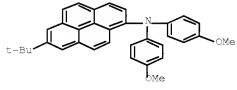
AB The device comprises ≥1 layer containing a pyrene derivative I [A1,2 = (substituted) alkyl, (substituted) aryl] as an electron- or hole-transporting layer. The device is suited for use in a long-life low-threshold large-area display device.

IT 143877-69-4 143877-76-3
RL: USES (Uses)
(charge carrier transporter, in electroluminescent devices)

RN 143877-69-4 HCAPLUS
CN 1-Pyrenamine, 7-(1,1-dimethylethyl)-N,N-bis(4-methylphenyl)- (CA INDEX NAME)



RN 143877-76-3 HCAPLUS
CN 1-Pyrenamine, 7-(1,1-dimethylethyl)-N,N-bis(4-methoxyphenyl)- (CA INDEX NAME)



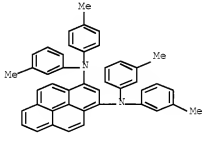
IC ICM H05B033-14
ICS C09K011-00; C09K011-06; G09F009-30
CC 73-10 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
IT 143877-69-4 143877-76-3
RL: USES (Uses)
(charge carrier transporter, in electroluminescent devices)

L64 ANSWER 38 OF 38 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1993:549178 HCAPLUS Full-text
DOCUMENT NUMBER: 119:149178
ORIGINAL REFERENCE NO.: 119:26495a,26498a
TITLE: Electroluminescent elements
INVENTOR(S): Onuma, Teruyuki; Shimada, Tomoyuki; Ota, Masabumi; Kawamura, Fumio; Sakon, Hirota; Takahashi, Toshihiko
PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan

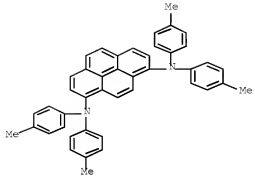
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04175395	A	19920623	JP 1990-305405	1990 1110
			<--	
US 5153073	A	19921006	US 1991-723375	1991 0628
			<--	
PRIORITY APPLN. INFO.:			JP 1990-179355 A1	1990 0706
			<--	
			JP 1990-305405 A	1990 1110
			<--	

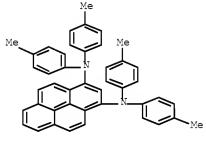
OTHER SOURCE(S): MARPAT 119:149178
ED Entered STN: 02 Oct 1993
AB The element, suited for use in large-area displays, comprises a cathode and an anode sandwiching ≥1 organic phosphor layer containing A3(NAlA2)n [A1,2 = (substituted) alkyl, (substituted) aryl; A3 = (substituted) vinyl; n = 1,2]. The element has a long-life stability with a low threshold voltage.
IT 146762-79-0
RL: PRP (Properties)
(electroluminescent phosphors from, blue emitting)
RN 146762-79-0 HCAPLUS
CN 1,3-Pyrenediamine, N1,N3,N3-tris(3-methylphenyl)-N1-(4-methylphenyl)- (9CI) (CA INDEX NAME)



IT 142827-48-3
RL: PRP (Properties)
(electroluminescent phosphors from, green emitting)
RN 142827-48-3 HCAPLUS
CN 1,8-Pyrenediamine, N,N,N',N'-tetrakis(4-methylphenyl)- (9CI) (CA INDEX NAME)



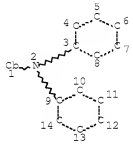
IT 142641-61-0
RL: PRP (Properties)
(electroluminescent phosphors from, greenish blue emitting)
RN 142641-61-0 HCAPLUS
CN 1,3-Pyrenediamine, N,N,N',N'-tetrakis(4-methylphenyl)- (9CI) (CA INDEX NAME)



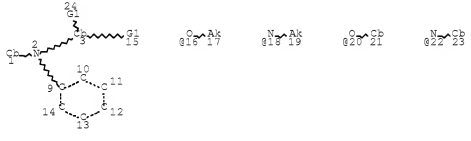
IC ICM C09K011-00
ICS C09K011-06; H05B033-14
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 74
IT 131625-67-7 139905-81-0 146762-79-0
RL: PRP (Properties)
(electroluminescent phosphors from, blue emitting)
IT 139905-74-1 142827-48-5
RL: PRP (Properties)
(electroluminescent phosphors from, green emitting)
IT 142641-61-0
RL: PRP (Properties)
(electroluminescent phosphors from, greenish blue emitting)

STRUCTURE SEARCH

```
=> d his 167

     (FILE 'HCAPLUS' ENTERED AT 15:32:18 ON 22 JUL 2008)
L67           43 S L66 NOT L64
                 SAV TEMP L64 GAR801HCPD/A
                 SAV TEMP L67 GAR801HCPE/A

=> d que stat l67
L3   (      18405)SEA FILE=REGISTRY ABB=ON  PLU=ON  3593.5/RID
L4                 STR
```

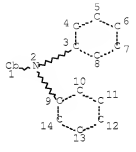


```
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS PCY  UNS  AT   1
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS E16 C  AT   1

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  14

STEREO ATTRIBUTES: NONE
L5           782 SEA FILE=REGISTRY SUB=L3 SSS FUL L4
L21                STR
```



```
VAR G1=AK/CB/16/18/20/22/CN/X
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS PCY  UNS  AT   1
GGCAT   IS UNS  AT   3
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS E16 C  AT   1
ECOUNT  IS E6 C  AT   3

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  19
```

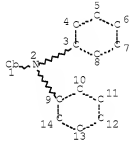
STEREO ATTRIBUTES: NONE
L23 57 SEA FILE=REGISTRY SUB=L5 SSS FUL L21
L25 (18405)SEA FILE=REGISTRY ABB=ON PLU=ON 3593.5/RID
L26 STR



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS PCY UNS AT 1
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS E16 C AT 1

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE
L27 (782)SEA FILE=REGISTRY SUB=L25 SSS FUL L26
L28 (359)SEA FILE=HCAPLUS ABB=ON PLU=ON L27
L29 (1474106)SEA FILE=HCAPLUS ABB=ON PLU=ON 73/SC,SX
L30 (127)SEA FILE=HCAPLUS ABB=ON PLU=ON L28 AND L29
L31 QUE ABB=ON PLU=ON PY<2004 OR PRY<2004 OR AY<2004 OR MY<2004 OR REVIEW/DT
L32 81 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 AND L31
L33 (18405)SEA FILE=REGISTRY ABB=ON PLU=ON 3593.5/RID
L34 STR

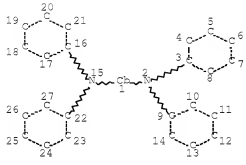


NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS PCY UNS AT 1
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS E16 C AT 1

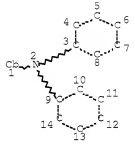
GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

```
L35 (       782)SEA FILE=REGISTRY SUB=L33 SSS FUL L34
L36 (   1474106)SEA FILE=HCAPLUS ABB=ON  PLU=ON  73/SC,SX
L37             QUE  ABB=ON  PLU=ON  PY<2004 OR PRY<2004 OR AY<2004 OR
                MY<2004 OR REVIEW/DT
L38             STR
```

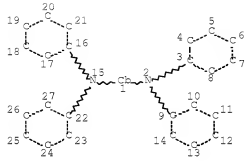


```
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS PCY  UNS  AT   1
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS E16 C  AT   1

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  27

STEREO ATTRIBUTES: NONE
L39 (       199)SEA FILE=REGISTRY SUB=L35 SSS FUL L38
L40 (        71)SEA FILE=HCAPLUS ABB=ON  PLU=ON  L39
L41 (        47)SEA FILE=HCAPLUS ABB=ON  PLU=ON  L40 AND L37
L42 (        18 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L41 AND L36
L43 (     18405)SEA FILE=REGISTRY ABB=ON  PLU=ON  3593.5/RID
L44             STR
```

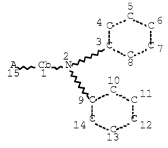


```
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS PCY  UNS  AT   1
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS E16 C  AT   1

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  14

STEREO ATTRIBUTES: NONE
L45 (       782)SEA FILE=REGISTRY SUB=L43 SSS FUL L44
L46 (   1474106)SEA FILE=HCAPLUS ABB=ON  PLU=ON  73/SC,SX
```

```
L47             QUE  ABB=ON  PLU=ON  PY<2004 OR PRY<2004 OR AY<2004 OR
                MY<2004 OR REVIEW/DT
L48             STR
```



```
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS PCY  UNS  AT   1
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS E16 C  AT   1

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  27

STEREO ATTRIBUTES: NONE
L49 (       199)SEA FILE=REGISTRY SUB=L45 SSS FUL L48
L50             STR
```



```
NODE ATTRIBUTES:
NSPEC   IS RC     AT  15
DEFAULT MLEVEL IS ATOM
GGCAT   IS PCY  UNS  AT   1
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS E16 C  AT   1

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  15

STEREO ATTRIBUTES: NONE
L51 (       257)SEA FILE=REGISTRY SUB=L45 SSS FUL L50
L52 (        58)SEA FILE=REGISTRY ABB=ON  PLU=ON  L51 NOT L49
L53 (        31)SEA FILE=HCAPLUS ABB=ON  PLU=ON  L52
L54 (        30)SEA FILE=HCAPLUS ABB=ON  PLU=ON  L53 AND L47
L55             4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L54 AND L46
L56           118 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L5/P
L57            80 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L56 AND L31
```

```
L58       1474466 SEA FILE=HCAPLUS ABB=ON  PLU=ON  73/SC,SX
L59            19 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L58 AND L57
L60            33 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L42 OR L55 OR L59
L61            37 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L23
L62            31 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L61 AND L47
L63             8 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L62 AND L58
L64            38 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L60 OR L63
L65        593618 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "ELECTROLUMINESCENT
                  DEVICES"+MAX/CT
L66            79 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L32 AND L65
L67            43 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L66 NOT L64
```

STRUCTURE SEARCH RESULTS (FHITSTR)

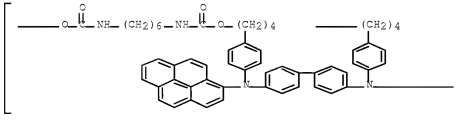
=> d l67 1-43 ibib ed fhitstr

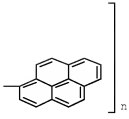
L67 ANSWER 1 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:522848 HCAPLUS Full-text
DOCUMENT NUMBER: 143:50517
TITLE: Organic electroluminescent device
INVENTOR(S): Hirose, Eiichi; Seki, Mieko; Okuda, Daisuke; Ozaki, Tadayoshi; Agata, Takeshi; Ishii, Toru; Mashimo, Kiyokazu; Moriyama, Hiroaki; Sato, Katsuhiro; Nishino, Yohei
PATENT ASSIGNEE(S): Fuji Xerox Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 142 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005158561	A	20050616	JP 2003-396947	2003 1127
			<--	
PRIORITY APPLN. INFO.:			JP 2003-396947	2003 1127
			<--	

ED Entered STN: 17 Jun 2005
IT 853362-89-7
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent device)
RN 853362-89-7 HCAPLUS
CN Poly[oxycarbonylimino-1,6-hexanediyliminocarbonyloxy-1,4-butanediyl-1,4-phenylene(1-pyrenylimino)[1,1'-biphenyl]-4,4'-diyl(1-pyrenylimino)-1,4-phenylene-1,4-butanediyl] (9CI) (CA INDEX NAME)

PAGE 1-A





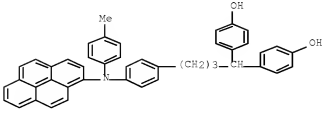
L67 ANSWER 2 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:530563 HCAPLUS Full-text
DOCUMENT NUMBER: 141:96310
TITLE: Organic semiconductor laser with polycarbonate resin
INVENTOR(S): Okada, Takashi; Sasaki, Masaomi; Torii, Masafumi; Kawamura, Shinichi; Kosaka, Toshiya
PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 49 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004186599	A	20040702	JP 2002-354321	2002 1205
			<--	
PRIORITY APPLN. INFO.:			JP 2002-354321	2002 1205
			<--	

ED Entered STN: 02 Jul 2004
IT 201361-79-7
RL: DEV (Device component use); USES (Uses)
(organic semiconductor laser with polycarbonate resin)
RN 201361-79-7 HCAPLUS
CN Carbonic acid, polymer with 1,6-hexanediol and 4,4'-[4-[4-[(4-methylphenyl)-1-pyrenylamino]phenyl]butylidene]bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 189503-60-4
CMF C45 H37 N O2



CM 2

CRN 629-11-8
CMF C6 H14 O2

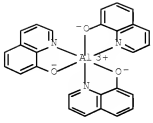
CM 3

CRN 463-79-6
CMF C H2 O3

L67 ANSWER 3 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:291722 HCAPLUS Full-text
DOCUMENT NUMBER: 140:329315
TITLE: Organic electroluminescent device
INVENTOR(S): Hirose, Eiichi; Okuda, Daisuke; Seki, Mieko; Ozaki, Tadayoshi; Yoneyama, Hiroto; Ishii, Toru; Agata, Takeshi; Mashimo, Kiyokazu; Sato, Katsuhiro
PATENT ASSIGNEE(S): Fuji Xerox Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 140 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004111206	A	20040408	JP 2002-271831	2002 0918
			<--	
US 20040081854	A1	20040429	US 2003-389947	2003 0318
			<--	
PRIORITY APPLN. INFO.:			JP 2002-271831 A	2002 0918
			<--	

ED Entered STN: 09 Apr 2004
IT 2085-33-8, Alq3
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent device)
RN 2085-33-8 HCAPLUS
CN Aluminum, tris(8-quinolinolato-κN1,κO8)- (CA INDEX NAME)



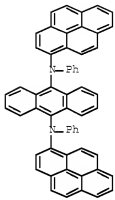
L67 ANSWER 4 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:203906 HCAPLUS Full-text
DOCUMENT NUMBER: 140:261172
TITLE: Organic light-emitting devices
INVENTOR(S): Saito, Akihito; Hiraoka, Mizuho; Suzuki, Koichi; Senoo, Akihiro; Tanabe, Hiroshi; Yamada, Naoki; Negishi, Chika
PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Japan
SOURCE: PCT Int. Appl., 84 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004020548	A1	20040311	WO 2003-JP10782	20030826
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2004087363	A	20040318	JP 2002-248354	20020828
AU 2003256084	A1	20040319	AU 2003-256084	20030826
US 20060068221	A1	20060330	US 2005-525198	20050222

PRIORITY APPLN. INFO.: JP 2002-248354 A 20020828

WO 2003-JP10782 W
2003
0826
<--

OTHER SOURCE(S): MARPAT 140:261172
ED Entered STN: 14 Mar 2004
IT 189263-91-0
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(organic light-emitting devices using hosts doped with Ph group-containing diamine derivs.)
RN 189263-91-0 HCAPLUS
CN 9,10-Anthracenediamine, N9,N10-diphenyl-N9,N10-di-1-pyrenyl- (CA INDEX NAME)



REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L67 ANSWER 5 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:203783 HCAPLUS Full-text
DOCUMENT NUMBER: 140:261171
TITLE: Condensed polycyclic compounds and organic light-emitting device using the same
INVENTOR(S): Suzuki, Koichi; Kawai, Tatsundo; Senoo, Akihiro; Yamada, Naoki; Saito, Akihito; Okajima, Maki
PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Japan
SOURCE: PCT Int. Appl., 77 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004020371	A1	20040311	WO 2003-JP10783	2003 0826

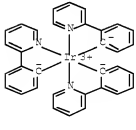
<--

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN,

MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,
SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG,
US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ,
DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL,
PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, ML, MR, NE, SN, TD, TG

JP 2004107326 A 20040408 JP 2003-291191
2003
0811
<--
AU 2003256085 A1 20040319 AU 2003-256085
2003
0826
<--
US 20050236974 A1 20051027 US 2005-522947
2005
0202
<--
US 7338721 B2 20080304
PRIORITY APPLN. INFO.: JP 2002-246600 A
2002
0827
<--
JP 2003-291191 A
2003
0811
<--
WO 2003-JP10783 W
2003
0826
<--

OTHER SOURCE(S): MARPAT 140:261171
ED Entered STN: 14 Mar 2004
IT 94928-86-6
RL: DEV (Device component use); MOA (Modifier or additive use);
USES (Uses)
(preparation of condensed polycyclic compds. and their use to the
manufacture of organic light-emitting devices)
RN 94928-86-6 HCAPLUS
CN Iridium, tris[2-(2-pyridinyl-kN)phenyl-kC]-,
(OC-6-22)- (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L67 ANSWER 6 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:777744 HCAPLUS Full-text
DOCUMENT NUMBER: 139:299013

TITLE: Oligofluorenylene compounds
INVENTOR(S): Saitoh, Akihito; Hiraoka, Mizuho; Suzuki, Koichi; Senoo, Akihiro; Tanabe, Hiroshi; Yamada, Naoki; Negishi, Chika; Kasahara, Maki
PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Japan
SOURCE: PCT Int. Appl., 62 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003080559	A1	20031002	WO 2003-JP3615	2003 0325
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2004002298	A	20040108	JP 2003-6796	2003 0115
JP 3848262	B2	20061122		
AU 2003221098	A1	20031008	AU 2003-221098	2003 0325
EP 1487779	A1	20041222	EP 2003-712917	2003 0325
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1568303	A	20050119	CN 2003-801298	2003 0325
US 20050106414	A1	20050519	US 2004-506300	2004 0901
US 7229702	B2	20070612		

PRIORITY APPLN. INFO.:		
JP 2002-88918	A	2002 0327
JP 2003-6796	A	2003 0115
WO 2003-JP3615	W	2003 0325

<--

OTHER SOURCE(S): MARPAT 139:299013
ED Entered STN: 03 Oct 2003
IT 12798-95-7
RL: DEV (Device component use); USES (Uses)
(electrode; oligofluorenylene compds. for organic light-emitting devices)
RN 12798-95-7 HCAPLUS
CN Aluminum alloy, nonbase, Al,Li (CA INDEX NAME)

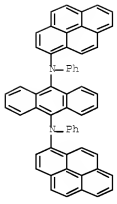
Component	Component Registry Number
Al	7429-90-5
Li	7439-93-2

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L67 ANSWER 7 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:628443 HCAPLUS Full-text
DOCUMENT NUMBER: 139:171119
TITLE: Organic electroluminescent device comprising coupled anthracene fluorene derivative and with amino-substituted hydrocarbon
INVENTOR(S): Totani, Yoshiyuki; Ishida, Tsutomu; Shimamura, Takehiko; Tanabe, Yoshimitsu; Nakatsuka, Masakatsu
PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 122 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003229273	A	20030815	JP 2002-25736	2002 0201
			<--	
JP 4080213	B2	20080423		
PRIORITY APPLN. INFO.:			JP 2002-25736	2002 0201
			<--	

OTHER SOURCE(S): MARPAT 139:171119
ED Entered STN: 15 Aug 2003
IT 189263-91-0
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent device comprising coupled anthracene fluorene derivative and with amino-substituted hydrocarbon)
RN 189263-91-0 HCAPLUS
CN 9,10-Anthracenediamine, N9,N10-diphenyl-N9,N10-di-1-pyrenyl- (CA INDEX NAME)



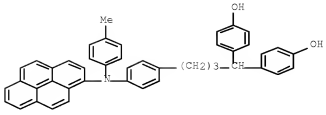
L67 ANSWER 8 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:568966 HCAPLUS Full-text
DOCUMENT NUMBER: 139:124838
TITLE: Electroluminescent component and frequency conversion method using polycarbonate
INVENTOR(S): Kosaka, Toshiya; Sasaki, Masaomi; Torii, Masafumi; Kawamura, Shinichi; Okada, Takashi; Ariga, Tamotsu
PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003208985	A	20030725	JP 2002-5391	2002 0111
			<--	
PRIORITY APPLN. INFO.:			JP 2001-344987 A	2001 1109
			<--	

ED Entered STN: 25 Jul 2003
IT 201361-79-7
RL: DEV (Device component use); USES (Uses)
(electroluminescent component and frequency conversion method using polycarbonate)
RN 201361-79-7 HCAPLUS
CN Carbonic acid, polymer with 1,6-hexanediol and 4,4'-[4-[4-[(4-methylphenyl)-1-pyrenylamino]phenyl]butylidene]bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 189503-60-4
CMF C45 H37 N O2



CM 2

CRN 629-11-8
CMF C6 H14 O2

CM 3

CRN 463-79-6
CMF C H2 O3

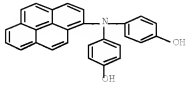
L67 ANSWER 9 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:550672 HCAPLUS Full-text
DOCUMENT NUMBER: 139:124811
TITLE: Electroluminescent device and frequency conversion method using polycarbonate compound
INVENTOR(S): Sasaki, Masaomi; Torii, Masafumi; Kawamura, Shinichi; Okada, Takashi; Kosaka, Toshiya; Ariga, Tamotsu
PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003203777	A	20030718	JP 2001-402043	2001 1228
			<--	
PRIORITY APPLN. INFO.:			JP 2001-402043	2001 1228
			<--	

ED Entered STN: 18 Jul 2003
IT 561323-20-4
RL: DEV (Device component use); USES (Uses)
(electroluminescent device and frequency conversion method
using polycarbonate compound)
RN 561323-20-4 HCAPLUS
CN Carbonic acid, polymer with 2,2'-oxybis[ethanol] and
4,4'-(1-pyrenylimino)bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 167100-14-3
CMF C28 H19 N O2

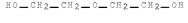


CM 2

CRN 463-79-6
CMF C H2 O3

CM 3

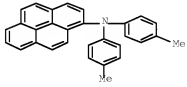
CRN 111-46-6
CMF C4 H10 O3



L67 ANSWER 10 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:17570 HCAPLUS Full-text
DOCUMENT NUMBER: 138:98157
TITLE: Electrophotographic printer using source for light with specified wavelength for photoconductor
INVENTOR(S): Niimi, Tatsuya
PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 65 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003005402	A	20030108	JP 2002-70984	20020314
			<--	
JP 3883456	B2	20070221		
PRIORITY APPLN. INFO.:			JP 2001-73834 A	20010315
			<--	

OTHER SOURCE(S): MARPAT 138:98157
ED Entered STN: 09 Jan 2003
IT 131625-67-7
RL: MOA (Modifier or additive use); USES (Uses)
(electrophotog. printer having semiconductive light source and photoconductor having protective layer containing)
RN 131625-67-7 HCAPLUS
CN 1-Pyrenamine, N,N-bis(4-methylphenyl)- (CA INDEX NAME)



L67 ANSWER 11 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:848332 HCAPLUS Full-text
DOCUMENT NUMBER: 137:343669
TITLE: Organic electroluminescent devices
INVENTOR(S): Kato, Hiroshi
PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002324664	A	20021108	JP 2001-131017	20010427
			<--	
PRIORITY APPLN. INFO.:			JP 2001-131017	20010427
			<--	

ED Entered STN: 08 Nov 2002
IT 50926-11-9, ITO
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent devices)
RN 50926-11-9 HCAPLUS
CN Indium tin oxide (CA INDEX NAME)

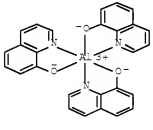
Component	Ratio	Component

		Registry Number
O	x	17778-80-2
In	x	7440-74-6
Sn	x	7440-31-5

L67 ANSWER 12 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:611919 HCAPLUS Full-text
DOCUMENT NUMBER: 137:161189
TITLE: Organic electroluminescence devices
INVENTOR(S): Suzuki, Mutsumi; Fukuyama, Masao
PATENT ASSIGNEE(S): Matsushita Electric Industrial Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002231457	A	20020816	JP 2001-26415	2001 0202
			<--	
JP 3690286	B2	20050831		
PRIORITY APPLN. INFO.:			JP 2001-26415	2001 0202
			<--	

ED Entered STN: 16 Aug 2002
IT 2085-33-8, Tris(8-quinolinolato)aluminum
RL: DEV (Device component use); USES (Uses)
(organic electroluminescence devices)
RN 2085-33-8 HCAPLUS
CN Aluminum, tris(8-quinolinolato-κN1,κO8)- (CA INDEX NAME)



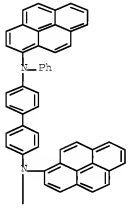
L67 ANSWER 13 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:479989 HCAPLUS Full-text
DOCUMENT NUMBER: 137:70352
TITLE: Polyamino fluorene derivative for electroluminescent material
INVENTOR(S): Miki, Tetsuzo; Kimura, Toshihide; Nakanishi, Naoko; Komatsu, Shihoko; Kusano, Shigeru
PATENT ASSIGNEE(S): Hodogaya Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

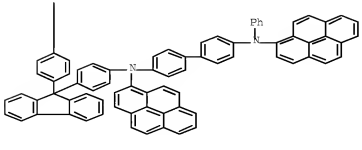
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002179630	A	20020626	JP 2001-301076	20010928
			<--	
PRIORITY APPLN. INFO.:			JP 2000-296908 A	20000928
			<--	

OTHER SOURCE(S): MARPAT 137:70352
ED Entered STN: 26 Jun 2002
IT 439133-37-6
RL: DEV (Device component use); USES (Uses)
(polyamino-fluorene derivative for electroluminescent material)
RN 439133-37-6 HCAPLUS
CN [1,1'-Biphenyl]-4,4'-diamine, N,N''-(9H-fluoren-9-ylidenedi-4,1-phenylene)bis[N'-phenyl-N,N'-di-1-pyrenyl- (9CI) (CA INDEX NAME)

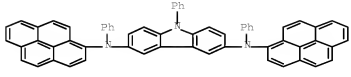
PAGE 1-A



PAGE 2-A



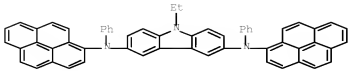
L67 ANSWER 14 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:299600 HCAPLUS Full-text
DOCUMENT NUMBER: 137:93475
TITLE: Light-emitting carbazole derivatives for electroluminescent materials
AUTHOR(S): Lin, Jiann T'suen; Thomas, K. R. Justin; Tao, Yu-Tai; Ko, Chung-Wen
CORPORATE SOURCE: Institute of Chemistry, Academia Sinica, Taipei, 115, Taiwan
SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (2002), 4464(Organic Light-Emitting Materials and Devices V), 307-316
CODEN: PSISDG; ISSN: 0277-786X
PUBLISHER: SPIE-The International Society for Optical Engineering
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 22 Apr 2002
IT 340162-05-2
RL: DEV (Device component use); PRP (Properties); USES (Uses)
(light-emitting carbazole derivs. for electroluminescent materials)
RN 340162-05-2 HCAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6,9-triphenyl-N3,N6-di-1-pyrenyl- (CA INDEX NAME)



REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

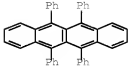
L67 ANSWER 15 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:889365 HCAPLUS Full-text
DOCUMENT NUMBER: 136:125727
TITLE: Light-Emitting Diodes Based on a Carbazole-Derivatized Dopant: Origin of Dopant Excitation as a Function of the Device Structure
AUTHOR(S): Ko, Chung-Wen; Tao, Yu-Tai; Lin, Jiann T.; Thomas, K. R. Justin
CORPORATE SOURCE: Institute of Chemistry, Academia Sinica, Taipei, 115, Peop. Rep. China
SOURCE: Chemistry of Materials (2002), 14(1), 357-361
CODEN: CMATEX; ISSN: 0897-4756
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 10 Dec 2001
IT 372590-02-4
RL: DEV (Device component use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process); USES (Uses)
(dopant; origin of dopant excitation as function structure of light-emitting diodes based on carbazole-derivatized dopant)

RN 373390-02-4 HCAPLUS
CN 9H-Carbazole-3,6-diamine, 9-ethyl-N3,N6-diphenyl-N3,N6-di-1-pyrenyl- (CA INDEX NAME)



REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L67 ANSWER 16 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:377669 HCAPLUS Full-text
DOCUMENT NUMBER: 133:65435
TITLE: Blue-emitting organic EL devices with a hole blocking layer
AUTHOR(S): Sato, Y.; Ichinosawa, S.; Ogata, T.; Fugono, M.; Murata, Y.
CORPORATE SOURCE: Mitsubishi Chemical 1000, Yokohama Research Center, Yokohama, Japan
SOURCE: Synthetic Metals (2000), 111-112, 25-29
CODEN: SYMEDZ; ISSN: 0379-6779
PUBLISHER: Elsevier Science S.A.
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 07 Jun 2000
IT 517-51-1, Rubrene
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(blue-emitting organic electroluminescent devices with hole blocking layer doped with)
RN 517-51-1 HCAPLUS
CN Naphthacene, 5,6,11,12-tetraphenyl- (CA INDEX NAME)



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

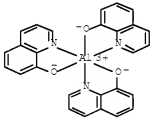
L67 ANSWER 17 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:670067 HCAPLUS Full-text
DOCUMENT NUMBER: 131:294207
TITLE: Hole-transporting material and use thereof
INVENTOR(S): Tamano, Michiko; Okutsu, Satoshi; Enokida, Toshio
PATENT ASSIGNEE(S): Toyo Ink Manufacturing Co., Ltd., Japan
SOURCE: U.S., 22 pp., Cont.-in-part of U.S. Ser. No. 762,921, abandoned.

CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5968675	A	19991019	US 1998-85251	1998 0528
			<--	
JP 09222741	A	19970826	JP 1996-306049	1996 1118
			<--	

PRIORITY APPLN. INFO.: JP 1995-321345 A 1995 1211
<-- JP 1996-306049 A 1996 1118
<-- US 1996-762921 B2 1996 1210
<--

OTHER SOURCE(S): MARPAT 131:294207
ED Entered STN: 21 Oct 1999
IT 2085-33-8, Tris(8-hydroxyquinoline)aluminum
RL: DEV (Device component use); USES (Uses)
(hole-transporting materials based on triarylamine derivs. and their use in electroluminescent devices and electrophotog. photoreceptors)
RN 2085-33-8 HCAPLUS
CN Aluminum, tris(8-quinolinolato-κN1,κO8)- (CA INDEX NAME)



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L67 ANSWER 18 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:163164 HCAPLUS Full-text
DOCUMENT NUMBER: 130:244249
TITLE: Organic thin film electroluminescent device containing aromatic polymcarbonate resin
INVENTOR(S): Nagai, Kazukiyo; Adachi, Chihaya
PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan

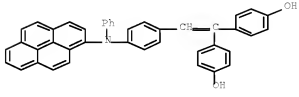
SOURCE: Jpn. Kokai Tokkyo Koho, 47 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11067452	A	19990309	JP 1997-228919	19970811
			<--	
JP 3578253	B2	20041020		
PRIORITY APPLN. INFO.:			JP 1997-228919	19970811
			<--	

ED Entered STN: 12 Mar 1999
IT 221237-39-4
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(organic thin-film electroluminescent device containing aromatic polycarbonate)
RN 221237-39-4 HCAPLUS
CN Methanol, trichloro-, carbonate (2:1), polymer with 4,4'-(1-methylethylidene)bis[phenol] and 4,4'-[[4-(phenyl-1-pyrenylamino)phenyl]ethenylidene]bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 198769-63-0
CMF C42 H29 N O2



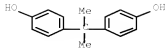
CM 2

CRN 32315-10-9
CMF C3 Cl6 O3

CM 3

CRN 80-05-7

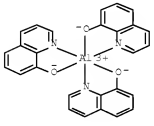
CMF C15 H16 O2



L67 ANSWER 19 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:111658 HCAPLUS Full-text
DOCUMENT NUMBER: 130:202697
TITLE: Organic electroluminescent device used as planar light source in optical displays
INVENTOR(S): Okutsu, Akira; Tamano, Michiko; Onikubo, Shunichi; Enokida, Toshio
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 27 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11040359	A	19990212	JP 1997-195294	1997 0722
			<--	
JP 3890686	B2	20070307		
PRIORITY APPLN. INFO.:			JP 1997-195294	1997 0722
			<--	

OTHER SOURCE(S): MARPAT 130:202697
ED Entered STN: 18 Feb 1999
IT 2085-33-8, Al 8q
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent device used as planar light source in optical displays)
RN 2085-33-8 HCAPLUS
CN Aluminum, tris(8-quinolinolato-κN1,κO8)- (CA INDEX NAME)



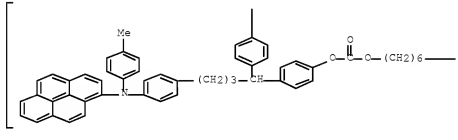
L67 ANSWER 20 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:78780 HCAPLUS Full-text
DOCUMENT NUMBER: 130:175066
TITLE: Organic thin film electroluminescent device containing polycarbonate resin
INVENTOR(S): Nagai, Kazukiyo; Katayama, Akira; Adachi, Chihaya
PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

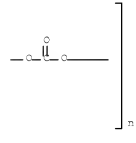
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11031584	A	19990202	JP 1997-193188	19970703
			<--	
PRIORITY APPLN. INFO.:			JP 1997-193188	19970703
			<--	

ED Entered STN: 05 Feb 1999
IT 189503-59-1
RL: DEV (Device component use); USES (Uses)
(organic thin film electroluminescent device containing aromatic polycarbonate-based light-emitting layer)
RN 189503-59-1 HCAPLUS
CN Poly[oxycarbonyloxy-1,6-hexanediyloxycarbonyloxy-1,4-phenylene[4-[4-[(4-methylphenyl)-1-pyrenylamino]phenyl]butylidene]-1,4-phenylene] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

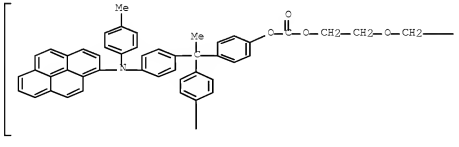


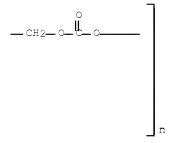
L67 ANSWER 21 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:72212 HCAPLUS Full-text
DOCUMENT NUMBER: 130:175062
TITLE: Organic thin-film electroluminescent (EL) device containing heat-resistant aromatic polycarbonate
INVENTOR(S): Nagai, Kazukiyo; Tamura, Hiroshi; Adachi, Chihaya
PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11026160	A	19990129	JP 1997-193183	19970703
PRIORITY APPLN. INFO.:			JP 1997-193183	19970703

ED Entered STN: 03 Feb 1999
IT 184363-47-1
RL: DEV (Device component use); USES (Uses)
(durable organic thin-film electroluminescent device containing triarylamine-type aromatic polycarbonate)
RN 184363-47-1 HCAPLUS
CN Poly[oxycarbonyloxy-1,2-ethanediyloxy-1,2-ethanediyloxycarbonyloxy-1,4-phenylene[1-[4-[(4-methylphenyl)-1-pyrenylamino]phenyl]ethylidene]-1,4-phenylene] (9CI) (CA INDEX NAME)

PAGE 1-A



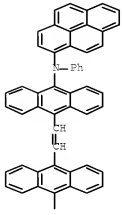


L67 ANSWER 22 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:35313 HCAPLUS Full-text
DOCUMENT NUMBER: 130:145976
TITLE: Organic electroluminescent material containing anthracene derivative
INVENTOR(S): Okutsu, Satoshi; Tamano, Michiko; Onikubo, Shunichi; Enokida, Toshio
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 36 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11008068	A	19990112	JP 1997-161418	1997 0618
			<--	
JP 3591226	B2	20041117		
PRIORITY APPLN. INFO.:			JP 1997-161418	1997 0618
			<--	

OTHER SOURCE(S): MARPAT 130:145976
ED Entered STN: 19 Jan 1999
IT 220072-02-6
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent device containing anthracene derivative)
RN 220072-02-6 HCAPLUS
CN 1-Pyrenamine, N,N'-(1,2-ethenediyldi-10,9-anthracenediyl)bis[N-phenyl- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

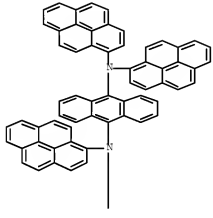
L67 ANSWER 23 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:180620 HCAPLUS Full-text
DOCUMENT NUMBER: 128:276872
ORIGINAL REFERENCE NO.: 128:54683a,54686a
TITLE: Organic electroluminescent devices and N-aryl-substituted diaminoanthracene compounds for use in their manufacture
INVENTOR(S): Enokida, Toshio; Tamano, Michiko; Okutsu, Satoshi
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 38 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10072581	A	19980317	JP 1996-244493	19960917
			<--	
US 6251531	B1	20010626	US 1998-30791	19980226
			<--	
PRIORITY APPLN. INFO.:			JP 1995-245607 A	

1995
0925
<--
JP 1996-12430 A
1996
0129
<--
JP 1996-170809 A
1996
0701
<--
US 1996-688879 A3
1996
0731
<--

OTHER SOURCE(S): MARPAT 128:276872
ED Entered STN: 27 Mar 1998
IT 189264-01-5
RL: DEV (Device component use); PRP (Properties); USES (Uses)
(light-emitting substances; organic electroluminescent devices and N-aryl-substituted diaminoanthracene compds. for use in manufacture)
RN 189264-01-5 HCAPLUS
CN 9,10-Anthracenediamine, N9,N9,N10,N10-tetrabenzo[def]phenanthren-1-yl- (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

L67 ANSWER 24 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:180619 HCAPLUS Full-text
DOCUMENT NUMBER: 128:276871
ORIGINAL REFERENCE NO.: 128:54683a,54686a
TITLE: Organic electroluminescent devices and

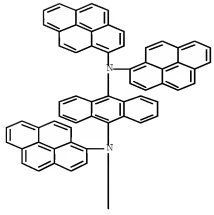
TITLE: N-aryl-substituted diaminoanthracene compounds for use in their manufacture
INVENTOR(S): Enokida, Toshio; Tamano, Michiko; Okutsu, Satoshi
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 36 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10072580	A	19980317	JP 1996-244492	19960917
			<--	
JP 2924810	B2	19990726		
US 6251531	B1	20010626	US 1998-30791	19980226
			<--	
JP 11265788	A	19990928	JP 1999-7257	19990114
			<--	
JP 3340687	B2	20021105		

PRIORITY APPLN. INFO.: JP 1995-245607 A 19950925
<-- JP 1996-12430 A 19960129
<-- JP 1996-170808 A 19960701
<-- US 1996-688879 A3 19960731
<-- JP 1996-244492 A3 19960917
<--

OTHER SOURCE(S): MARPAT 128:276871
ED Entered STN: 27 Mar 1998
IT 189264-01-5
RL: DEV (Device component use); PRP (Properties); USES (Uses) (light-emitting substances; for manufacture of organic electroluminescent devices with high brightness and long service life)
RN 189264-01-5 HCAPLUS
CN 9,10-Anthracenediamine, N9,N9,N10,N10-tetrabenzo[def]phenanthren-1-yl- (CA INDEX NAME)

PAGE 1-A



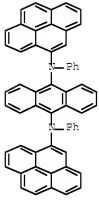
PAGE 2-A

L67 ANSWER 25 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:180618 HCAPLUS Full-text
DOCUMENT NUMBER: 128:276870
ORIGINAL REFERENCE NO.: 128:54683a,54686a
TITLE: Organic electroluminescent devices and N-aryl-substituted diaminoanthracene compounds for use in their manufacture
INVENTOR(S): Enokida, Toshio; Tamano, Michiko; Okutsu, Satoshi
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 23 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10072579	A	19980317	JP 1996-244491	19960917
			<--	
JP 2924809	B2	19990726		
US 6251531	B1	20010626	US 1998-30791	19980226
			<--	
PRIORITY APPLN. INFO.:			JP 1995-245607 A	1995

0925
<--
JP 1996-12430 A
1996
0129
<--
JP 1996-170810 A
1996
0701
<--
US 1996-688879 A3
1996
0731
<--

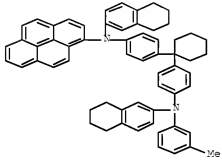
OTHER SOURCE(S): MARPAT 128:276870
ED Entered STN: 27 Mar 1998
IT 205581-61-9
RL: DEV (Device component use); PRP (Properties); USES (Uses)
(light-emitting substances; organic electroluminescent devices and N-aryl-substituted diaminoanthracene compds. for use in manufacture)
RN 205581-61-9 HCAPLUS
CN 9,10-Anthracenediamine, N9,N10-diphenyl-N9,N10-di-4-pyrenyl- (CA INDEX NAME)



L67 ANSWER 26 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:784185 HCAPLUS Full-text
DOCUMENT NUMBER: 128:55233
ORIGINAL REFERENCE NO.: 128:10669h,10670a
TITLE: Charge-transporting aromatic diamines and organic electroluminescent elements
INVENTOR(S): Takei, Atsushi; Anzai, Akitoshi; Watanabe, Takanobu; Inaki, Chieko
PATENT ASSIGNEE(S): Hodogaya Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 26 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09316038	A	19971209	JP 1996-159150	1996

0531
<--
PRIORITY APPLN. INFO.: JP 1996-159150
1996
0531
<--
OTHER SOURCE(S): MARPAT 128:55233
ED Entered STN: 15 Dec 1997
IT 180741-97-3
RL: DEV (Device component use); USES (Uses)
(charge-transporting aromatic diamines for stable electroluminescent elements)
RN 180741-97-3 HCAPLUS
CN 1-Pyrenamine, N-[4-[1-[4-[(3-methylphenyl)(5,6,7,8-tetrahydro-2-naphthalenyl)amino]phenyl]cyclohexyl]phenyl]-N-(5,6,7,8-tetrahydro-2-naphthalenyl)- (CA INDEX NAME)



L67 ANSWER 27 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:480901 HCAPLUS Full-text
DOCUMENT NUMBER: 127:115061
ORIGINAL REFERENCE NO.: 127:22069a,22072a
TITLE: Hole-transporting material and use thereof
INVENTOR(S): Tamano, Michiko; Okutsu, Satoshi; Enokida, Toshio
PATENT ASSIGNEE(S): Toyo Ink Manufacturing Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 32 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 779765	A2	19970618	EP 1996-309019	1996 1211
			<--	
EP 779765	A3	19970730		
EP 779765	B1	20010801		
R: DE, FR, GB				
JP 09222741	A	19970826	JP 1996-306049	1996 1118
			<--	
PRIORITY APPLN. INFO.:			JP 1995-321345 A	1995

1211

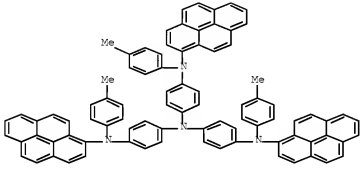
<--

JP 1996-306049 A

1996
1118

<--

OTHER SOURCE(S): MARPAT 127:115061
ED Entered STN: 02 Aug 1997
IT 192180-93-1
RL: DEV (Device component use); PRP (Properties); USES (Uses)
(aryl amine hole-transporting materials and apparatus using them)
RN 192180-93-1 HCAPLUS
CN 1,4-Benzenediamine, N1-benzo[def]phenanthren-1-yl-N4,N4-bis[4-[benzo[def]phenanthren-1-yl(4-methylphenyl)amino]phenyl]-N1-(4-methylphenyl)- (CA INDEX NAME)



L67 ANSWER 28 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:334774 HCAPLUS Full-text
DOCUMENT NUMBER: 126:310317
ORIGINAL REFERENCE NO.: 126:60025a,60028a
TITLE: Light-emitting material for organic electroluminescence device, and organic electroluminescence device for which the light-emitting material is adapted
INVENTOR(S): Enokida, Toshio; Tamano, Michiko; Okutsu, Satoshi
PATENT ASSIGNEE(S): Toyo Ink Manufacturing Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 46 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 765106	A2	19970326	EP 1996-305586	1996 0730
			<--	
EP 765106	A3	19970813		
EP 765106	B1	20021127		
R: DE, FR, GB				
EP 1146034	A1	20011017	EP 2001-113795	1996 0730

<--

R: DE, FR, GB

US 5759444 A 19980602 US 1996-688879 1996 0731

<--

KR 204220 B1 19990615 KR 1996-42007 1996 0924

<--

US 6251531 B1 20010626 US 1998-30791 1998 0226

<--

PRIORITY APPLN. INFO.: JP 1995-245607 A 1995 0925

<--

JP 1996-12430 A 1996 0129

<--

EP 1996-305586 A3 1996 0730

<--

US 1996-688879 A3 1996 0731

<--

OTHER SOURCE(S): MARPAT 126:310317

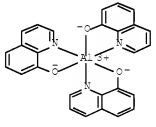
ED Entered STN: 26 May 1997

IT 2085-33-8

RL: DEV (Device component use); USES (Uses)
(anthracenediamine derivative-based light-emitting materials for organic electroluminescent devices and the devices)

RN 2085-33-8 HCAPLUS

CN Aluminum, tris(8-quinolinolato-κN1,κO8)- (CA INDEX NAME)



L67 ANSWER 29 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1996:523543 HCAPLUS Full-text

DOCUMENT NUMBER: 125:154084

ORIGINAL REFERENCE NO.: 125:28607a,28610a

TITLE: Organic thin-film electroluminescent (EL) devices with high durability

INVENTOR(S): Adachi, Chihaya; Nagai, Kazukyo; Tamoto, Nozomi

PATENT ASSIGNEE(S): Ricoh Kk, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08138868	A	19960531	JP 1995-239239	19950824
US 5709959	A	19980120	US 1995-529580	19950918

<-- <-- <--

PRIORITY APPLN. INFO.: JP 1994-248421 A1 19940916

ED Entered STN: 30 Aug 1996
IT 50926-11-9, ITO
RL: DEV (Device component use); USES (Uses)
(anode, with controlled ionization potential; organic thin-film EL devices with high durability)
RN 50926-11-9 HCAPLUS
CN Indium tin oxide (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	x	17778-80-2
In	x	7440-74-6
Sn	x	7440-31-5

L67 ANSWER 30 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:954797 HCAPLUS Full-text
DOCUMENT NUMBER: 123:354219
ORIGINAL REFERENCE NO.: 123:63279a,63282a
TITLE: Electroluminescence device
INVENTOR(S): Tamoto, Nozomi; Shimada, Tomoyuki; Nagai, Kazukyo; Adachi, Chihaya; Sakon, Hirota
PATENT ASSIGNEE(S): Ricoh Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07242871	A	19950919	JP 1994-64509	19940308

<-- <--

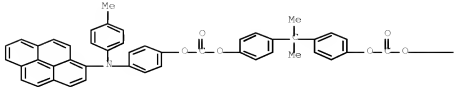
PRIORITY APPLN. INFO.: JP 1994-64509 19940308

<-- <--

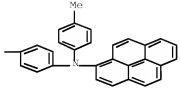
ED Entered STN: 01 Dec 1995
IT 170930-28-8
RL: DEV (Device component use); USES (Uses)
(carbonate containing diamine for organic electroluminescence device)

RN 170930-38-8 HCAPLUS
CN Carbonic acid, (1-methylethylidene)di-4,1-phenylene bis[4-[(4-methylphenyl)-1-pyrenylamino]phenyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L67 ANSWER 31 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:767930 HCAPLUS Full-text
DOCUMENT NUMBER: 123:183055
ORIGINAL REFERENCE NO.: 123:32305a,32308a
TITLE: Field-effect electroluminescent device containing aminopyrene derivative
INVENTOR(S): Tamoto, Nozomi; Nagai, Kazukyo; Adachi, Chihaya; Sakon, Hirota
PATENT ASSIGNEE(S): Ricoh Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07157754	A	19950620	JP 1993-338934	1993 1202
			<--	
PRIORITY APPLN. INFO.:			JP 1993-338934	A 1993 1202
			<--	
			JP 1993-280541	1993 1014
			<--	

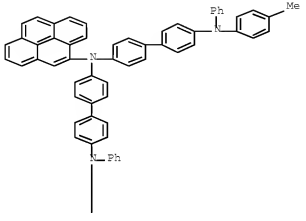
OTHER SOURCE(S): MARPAT 123:183055
ED Entered STN: 31 Aug 1995
IT 167274-15-9
RL: DEV (Device component use); USES (Uses)

(field-effect electroluminescent device containing aminopyrene derivative with stable luminescence)

RN 167274-15-9 HCAPLUS

CN [1,1'-Biphenyl]-4,4'-diamine, N-(4-methylphenyl)-N'-[4'-[(4-methylphenyl)phenylamino][1,1'-biphenyl]-4-yl]-N-phenyl-N'-4-pyrenyl- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

L67 ANSWER 32 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1995:677558 HCAPLUS Full-text

DOCUMENT NUMBER: 123:156122

ORIGINAL REFERENCE NO.: 123:27555a,27558a

TITLE: Organic electroluminescent materials and devices using them

INVENTOR(S): Enokida, Toshio

PATENT ASSIGNEE(S): Toyo Ink Mfg Co, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

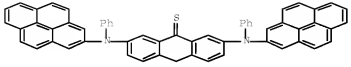
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07109449	A	19950425	JP 1993-258080	1993 1015
			<--	
JP 3070356	B2	20000731		

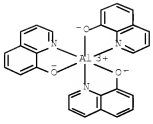
PRIORITY APPLN. INFO.: JP 1993-258080
1993
1015
<--
OTHER SOURCE(S): MARPAT 123:156122
ED Entered STN: 15 Jul 1995
IT 166659-06-9
RL: DEV (Device component use); USES (Uses)
(fused ring organic electroluminescent materials and devices using them)
RN 166659-06-9 HCAPLUS
CN 9(10H)-Anthracenethione, 2,7-bis(phenyl-2-pyrenylamino)- (CA INDEX NAME)



L67 ANSWER 33 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:663074 HCAPLUS Full-text
DOCUMENT NUMBER: 123:127048
ORIGINAL REFERENCE NO.: 123:22343a,22346a
TITLE: Electroluminescent element with oxadiazole derivative electron-transporting layer
INVENTOR(S): Nagai, Kazukyo; Adachi, Chihaya; Sakon, Hirota; Tamoto, Nozomi
PATENT ASSIGNEE(S): Ricoh Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07109454	A	19950425	JP 1993-280179	1993 1012
			<--	
JP 3482446	B2	20031222		

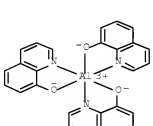
PRIORITY APPLN. INFO.: JP 1993-280179
1993
1012
<--
OTHER SOURCE(S): MARPAT 123:127048
ED Entered STN: 11 Jul 1995
IT 2085-33-8, Tris(8-quinolinolato)aluminum
RL: DEV (Device component use); USES (Uses)
(electron-injection layer; electroluminescent devices containing oxadiazole derivative electron-transporting layers)
RN 2085-33-8 HCAPLUS
CN Aluminum, tris(8-quinolinolato-κN1,κO8)- (CA INDEX NAME)



L67 ANSWER 34 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:663073 HCAPLUS Full-text
DOCUMENT NUMBER: 123:127047
ORIGINAL REFERENCE NO.: 123:22343a,22346a
TITLE: Electroluminescent element with oxadiazole derivative electron-transporting layer
INVENTOR(S): Nagai, Kazukyo; Adachi, Chihaya; Sakon, Hirota; Tamoto, Nozomi
PATENT ASSIGNEE(S): Ricoh Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07109453	A	19950425	JP 1993-280178	1993 1012
			<--	
JP 3368390	B2	20030120		
PRIORITY APPLN. INFO.:			JP 1993-280178	1993 1012
			<--	

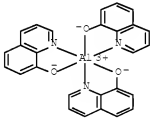
OTHER SOURCE(S): MARPAT 123:127047
ED Entered STN: 11 Jul 1995
IT 2085-33-8
RL: DEV (Device component use); USES (Uses)
(electron-injection layer; electroluminescent devices containing oxadiazole derivative electron-transporting layers)
RN 2085-33-8 HCAPLUS
CN Aluminum, tris(8-quinolinolato-κN1,κO8)- (CA INDEX NAME)



L67 ANSWER 35 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:663072 HCAPLUS Full-text
DOCUMENT NUMBER: 123:127046
ORIGINAL REFERENCE NO.: 123:22343a,22346a
TITLE: Electroluminescent element with oxadiazole derivative electron-transporting layer
INVENTOR(S): Nagai, Kazukyo; Adachi, Chihaya; Sakon, Hirota; Tamoto, Nozomi
PATENT ASSIGNEE(S): Ricoh Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

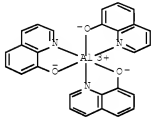
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07109452	A	19950425	JP 1993-280092	1993 1013 <--
PRIORITY APPLN. INFO.:			JP 1993-280092	1993 1013 <--

OTHER SOURCE(S): MARPAT 123:127046
ED Entered STN: 11 Jul 1995
IT 2085-33-8, Tris(8-quinolinolato)aluminum
RL: DEV (Device component use); USES (Uses)
(electron-injection layer; electroluminescent element containing oxadiazole derivative electron-transporting layer)
RN 2085-33-8 HCAPLUS
CN Aluminum, tris(8-quinolinolato-κN1,κO8)- (CA INDEX NAME)



L67 ANSWER 36 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:562195 HCAPLUS Full-text
DOCUMENT NUMBER: 123:20922
ORIGINAL REFERENCE NO.: 123:3811a,3814a
TITLE: Molecular design of hole transport materials for obtaining high durability in organic electroluminescent diodes
AUTHOR(S): Adachi, Chihaya; Nagai, Kazukiyo; Tamoto, Nozomu
CORPORATE SOURCE: Chemical Products R and D Center, Ricoh Co.,

Ltd., Shizuoka, 410, Japan
SOURCE: Applied Physics Letters (1995), 66(20), 2679-81
CODEN: APPLAB; ISSN: 0003-6951
PUBLISHER: American Institute of Physics
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 20 May 1995
IT 2085-33-8, Aluminum, tris(8-quinolinolato)-
RL: DEV (Device component use); USES (Uses)
(hole transport material for obtaining high durability in organic electroluminescent diodes)
RN 2085-33-8 HCAPLUS
CN Aluminum, tris(8-quinolinolato-κN1,κO8)- (CA INDEX NAME)



L67 ANSWER 37 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:275316 HCAPLUS Full-text
DOCUMENT NUMBER: 122:302391
ORIGINAL REFERENCE NO.: 122:54841a,54844a
TITLE: Electroluminescent devices
INVENTOR(S): Nagai, Kazukyo; Adachi, Chihaya; Sakon, Hirota; Oota, Masabumi
PATENT ASSIGNEE(S): Ricoh Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06248260	A	19940906	JP 1993-61049	19930225
			<--	
PRIORITY APPLN. INFO.:			JP 1993-61049	19930225
			<--	

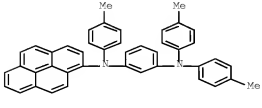
OTHER SOURCE(S): MARPAT 122:302391
ED Entered STN: 05 Jan 1995
IT 37271-44-6
RL: DEV (Device component use); USES (Uses)
(anode; electroluminescent devices containing thiazole derivs.)
RN 37271-44-6 HCAPLUS
CN Silver alloy, nonbase, Ag,Mg (CA INDEX NAME)

Component	Component Registry Number
Ag	7440-22-4
Mg	7439-95-4

L67 ANSWER 38 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:207991 HCAPLUS Full-text
DOCUMENT NUMBER: 122:20144
ORIGINAL REFERENCE NO.: 122:3887a,3890a
TITLE: Organic field-effect electroluminescent device containing amino compound
INVENTOR(S): Nagai, Kazukyo; Adachi, Chihaya; Sakon, Hirota; Shimada, Tomoyuki; Oota, Masabumi
PATENT ASSIGNEE(S): Ricoh Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06240248	A	19940830	JP 1993-52957	1993 0218 <--
PRIORITY APPLN. INFO.:			JP 1993-52957	1993 0218 <--

OTHER SOURCE(S): MARPAT 122:20144
ED Entered STN: 23 Nov 1994
IT 149111-88-6
RL: DEV (Device component use); USES (Uses)
(field-effect electroluminescent device containing amino compound with good durability)
RN 149111-88-6 HCAPLUS
CN 1,3-Benzenediamine, N,N,N'-tris(4-methylphenyl)-N-1-pyrenyl- (9CI) (CA INDEX NAME)

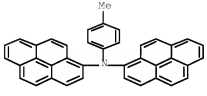


L67 ANSWER 39 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:207990 HCAPLUS Full-text
DOCUMENT NUMBER: 122:20143
ORIGINAL REFERENCE NO.: 122:3887a,3890a
TITLE: Organic field-effect electroluminescent device containing pyrene derivative
INVENTOR(S): Nagai, Kazukyo; Shimada, Tomoyuki; Sakon, Hirota; Adachi, Chihaya; Oota, Masabumi
PATENT ASSIGNEE(S): Ricoh Kk, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06240247	A	19940830	JP 1993-52955	1993 0218
			<--	
PRIORITY APPLN. INFO.:			JP 1993-52955	1993 0218
			<--	

OTHER SOURCE(S): MARPAT 122:20143
ED Entered STN: 23 Nov 1994
IT 145668-84-4
RL: DEV (Device component use); USES (Uses)
(field-effect electroluminescent device containing pyrene derivative with good durability)
RN 145668-84-4 HCAPLUS
CN 1-Pyrenamine, N-(4-methylphenyl)-N-1-pyrenyl- (CA INDEX NAME)

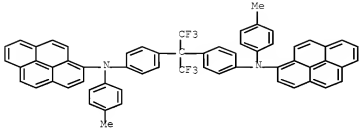


L67 ANSWER 40 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1994:641361 HCAPLUS Full-text
DOCUMENT NUMBER: 121:241361
ORIGINAL REFERENCE NO.: 121:43817a,43820a
TITLE: organic electroluminescent devices
INVENTOR(S): Nagai, Kazukyo; Oota, Masabumi; Sakon, Hirota; Adachi, Chihaya; Takahashi, Toshihiko
PATENT ASSIGNEE(S): Ricoh Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06065569	A	19940308	JP 1993-104993	1993 0407
			<--	
PRIORITY APPLN. INFO.:			JP 1992-186051 A1	1992 0620
			<--	

OTHER SOURCE(S): MARPAT 121:241361

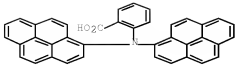
ED Entered STN: 12 Nov 1994
IT 149685-55-2
RL: PRP (Properties)
(electron-transport layers from, in white light-emitting electroluminescent devices)
RN 149685-55-2 HCAPLUS
CN 1-Pyrenamine, N,N'-[[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]di-4,1-phenylene]bis[N-(4-methylphenyl)- (9CI) (CA INDEX NAME)



L67 ANSWER 41 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1994:65542 HCAPLUS Full-text
DOCUMENT NUMBER: 120:65542
ORIGINAL REFERENCE NO.: 120:11657a,11660a
TITLE: Electroluminescent element
INVENTOR(S): Kawamura, Fumio; Ota, Masabumi; Onuma, Teruyuki; Sakon, Hirota; Takahashi, Toshihiko; Yamaguchi, Takehito; Sasaki, Masaomi
PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05021165	A	19930129	JP 1991-198895	1991 0712
			<--	
PRIORITY APPLN. INFO.:			JP 1991-198895	1991 0712
			<--	

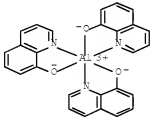
ED Entered STN: 05 Feb 1994
IT 152008-51-0
RL: PRP (Properties)
(anodes treated with, for electroluminescent devices)
RN 152008-51-0 HCAPLUS
CN Benzoic acid, 2-(di-1-pyrenylamino)- (CA INDEX NAME)



L67 ANSWER 42 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1993:459357 HCAPLUS Full-text
DOCUMENT NUMBER: 119:59357
ORIGINAL REFERENCE NO.: 119:10511a,10514a
TITLE: Thin-film organic electroluminescent device
INVENTOR(S): Onuma, Teruyuki; Ota, Masabumi; Sakon, Hirota; Takahashi, Toshihiko; Yamaguchi, Takehito
PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04334894	A	19921120	JP 1991-135448	19910510
			<--	
PRIORITY APPLN. INFO.:			JP 1991-135448	19910510
			<--	

ED Entered STN: 07 Aug 1993
IT 2085-33-8
RL: PRP (Properties)
(blue-yellow emitting, organic carrier-injection electroluminescent devices containing)
RN 2085-33-8 HCAPLUS
CN Aluminum, tris(8-quinolinolato-κN1,κO8)- (CA INDEX NAME)



L67 ANSWER 43 OF 43 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1992:416860 HCAPLUS Full-text
DOCUMENT NUMBER: 117:16860
ORIGINAL REFERENCE NO.: 117:2955a,2958a

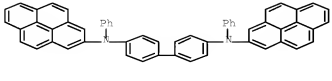
TITLE: Electroluminescent device with organic electroluminescent medium
INVENTOR(S): VanSlyke, Steven A.; Tang, Ching W.; O'Brien, Michael E.; Chen, Chin H.
PATENT ASSIGNEE(S): Eastman Kodak Co., USA
SOURCE: U.S., 12 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5061569	A	19911029	US 1990-561552	19900726
			<--	
CA 2046135	A1	19920127	CA 1991-2046135	19910703
			<--	
CA 2046135	C	19961210		
JP 05234681	A	19930910	JP 1991-186312	19910725
			<--	
JP 2851185	B2	19990127		
EP 468528	A1	19920129	EP 1991-112621	19910726
			<--	
EP 468528	B1	19950621		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE

PRIORITY APPLN. INFO.: US 1990-561552 A 19900726
<--

OTHER SOURCE(S): MARPAT 117:16860
ED Entered STN: 11 Jul 1992
IT 139255-24-6
RL: PRP (Properties)
(electroluminescent devices with hole-transporting layers from)
RN 139255-24-6 HCAPLUS
CN [1,1'-Biphenyl]-4,4'-diamine, N,N'-diphenyl-N,N'-di-2-pyrenyl- (9CI) (CA INDEX NAME)



FULL SEARCH HISTORY

```
=> d his nofile

     (FILE 'HOME' ENTERED AT 15:15:06 ON 22 JUL 2008)

     FILE 'HCAPLUS' ENTERED AT 15:16:53 ON 22 JUL 2008
L1             1 SEA ABB=ON  PLU=ON  US20070009758/PN
                 SEL RN

     FILE 'REGISTRY' ENTERED AT 15:18:52 ON 22 JUL 2008
L2            13 SEA ABB=ON  PLU=ON  (27973-29-1/BI OR 4496-49-5/BI OR
                 494834-22-9/BI OR 55389-75-8/BI OR 5650-10-2/BI OR
                 63451-41-2/BI OR 722498-84-2/BI OR 764657-23-0/BI OR
                 764657-24-1/BI OR 764657-25-2/BI OR 764657-26-3/BI OR
                 764657-27-4/BI OR 764657-28-5/BI)
                 ACT GAR801REG/A
                 ---------
L3   (     18405)SEA ABB=ON  PLU=ON  3593.5/RID
L4               STR
L5           782 SEA SUB=L3 SSS FUL L4
                 ---------
                 ACT GAR801REGA/A
                 ---------
L6   (     18405)SEA ABB=ON  PLU=ON  3593.5/RID
L7               STR
L8   (       782)SEA SUB=L6 SSS FUL L7
L9               STR
L10          199 SEA SUB=L8 SSS FUL L9
                 ---------
                 ACT GAR801REGB/A
                 ---------
L11  (     18405)SEA ABB=ON  PLU=ON  3593.5/RID
L12              STR
L13  (       782)SEA SUB=L11 SSS FUL L12
L14              STR
L15          257 SEA SUB=L13 SSS FUL L14
                 ---------
                 ACT GAR801REGC/A
                 ---------
L16  (     18405)SEA ABB=ON  PLU=ON  3593.5/RID
L17              STR
L18  (       782)SEA SUB=L16 SSS FUL L17
L19              STR
L20          748 SEA SUB=L18 SSS FUL L19
                 ---------
                 D SAV

     FILE 'LREGISTRY' ENTERED AT 15:22:17 ON 22 JUL 2008
                 D QUE STAT L10
                 D QUE STAT L15
                 D QUE STAT L20
L21              STR L4

     FILE 'REGISTRY' ENTERED AT 15:28:55 ON 22 JUL 2008
L22            1 SEA SUB=L5 SSS SAM L21
L23           57 SEA SUB=L5 SSS FUL L21
                 SAV TEMP L23 GAR801REGD/A

     FILE 'LREGISTRY' ENTERED AT 15:30:25 ON 22 JUL 2008
L24              STR L21

     FILE 'HCAPLUS' ENTERED AT 15:32:18 ON 22 JUL 2008
                 D SAV
                 ACT GAR801HCP/A
                 ---------
```

```
L25 (     18405)SEA ABB=ON  PLU=ON  3593.5/RID
L26               STR
L27 (       782)SEA SUB=L25 SSS FUL L26
L28 (       359)SEA ABB=ON  PLU=ON  L27
L29 (   1474106)SEA ABB=ON  PLU=ON  73/SC,SX
L30 (       127)SEA ABB=ON  PLU=ON  L28 AND L29
L31               QUE ABB=ON  PLU=ON  PY<2004 OR PRY<2004 OR AY<2004 OR
                  MY<2004 OR REVIEW/DT
L32           81 SEA ABB=ON  PLU=ON  L30 AND L31
                  ---------
                  ACT GAR801HCPA/A
                  ---------
L33 (     18405)SEA ABB=ON  PLU=ON  3593.5/RID
L34               STR
L35 (       782)SEA SUB=L33 SSS FUL L34
L36 (   1474106)SEA ABB=ON  PLU=ON  73/SC,SX
L37               QUE ABB=ON  PLU=ON  PY<2004 OR PRY<2004 OR AY<2004 OR
                  MY<2004 OR REVIEW/DT
L38               STR
L39 (       199)SEA SUB=L35 SSS FUL L38
L40 (        71)SEA ABB=ON  PLU=ON  L39
L41 (        47)SEA ABB=ON  PLU=ON  L40 AND L37
L42           18 SEA ABB=ON  PLU=ON  L41 AND L36
                  ---------
                  ACT GAR801HCPB/A
                  ---------
L43 (     18405)SEA ABB=ON  PLU=ON  3593.5/RID
L44               STR
L45 (       782)SEA SUB=L43 SSS FUL L44
L46 (   1474106)SEA ABB=ON  PLU=ON  73/SC,SX
L47               QUE ABB=ON  PLU=ON  PY<2004 OR PRY<2004 OR AY<2004 OR
                  MY<2004 OR REVIEW/DT
L48               STR
L49 (       199)SEA SUB=L45 SSS FUL L48
L50               STR
L51 (       257)SEA SUB=L45 SSS FUL L50
L52 (        58)SEA ABB=ON  PLU=ON  L51 NOT L49
L53 (        31)SEA ABB=ON  PLU=ON  L52
L54 (        30)SEA ABB=ON  PLU=ON  L53 AND L47
L55            4 SEA ABB=ON  PLU=ON  L54 AND L46
                  ---------
                  D QUE STAT L42
                  D QUE STAT L42
L56          118 SEA ABB=ON  PLU=ON  L5/P
L57           80 SEA ABB=ON  PLU=ON  L56 AND L31
L58      1474466 SEA ABB=ON  PLU=ON  73/SC,SX
L59           19 SEA ABB=ON  PLU=ON  L58 AND L57
L60           33 SEA ABB=ON  PLU=ON  L42 OR L55 OR L59
                  SAV TEMP L60 GAR801HCPC/A
L61           37 SEA ABB=ON  PLU=ON  L23
                  D QUE STAT
L62           31 SEA ABB=ON  PLU=ON  L61 AND L47
L63            8 SEA ABB=ON  PLU=ON  L62 AND L58
L64           38 SEA ABB=ON  PLU=ON  L60 OR L63
L65       593618 SEA ABB=ON  PLU=ON  "ELECTROLUMINESCENT DEVICES"+MAX/CT

L66           79 SEA ABB=ON  PLU=ON  L32 AND L65
L67           43 SEA ABB=ON  PLU=ON  L66 NOT L64
                  D QUE STAT L64
                  SAV TEMP L64 GAR801HCPD/A
                  SAV TEMP L67 GAR801HCPE/A
                  D QUE STAT L64
                  D L64 1-38 IBIB ED ABS HITSTR HITIND
                  D QUE STAT L67
                  D L67 1-43 IBIB ED FHITSTR
```